

TEXASARCHITECT



CHINA ISN'T THE ONLY PLACE WHERE YOU'LL FIND A GREAT WALL



You can find one just about anywhere. The next door neighbors. The office complex down the street.

Helping support the new highway project. Or just circling a majestic oak tree. We're talking about the KeyStone Retaining Wall System - a system so unique that it's unlike anything in the whole world

(even in China). The KeyStone system works because of its unique features. Like

the reinforced fiberglass pins that quickly and easily lock our mortarless system together.



The high strength, low absorption concrete that

withstands all that mother nature can throw its way. And the unique angled sides that allow for graceful curves and bends without sacrificing strength or integrity. Granted, there's only one Great Wall of China. But by the same token, there's only one KeyStone Retaining Wall System.



If you'd like more information please

JEWELL
Concrete Products Inc.

call us at 1-800-233-8686

Circle 7 on the reader inquiry card

KEYSTONE
RETAINING WALL SYSTEMS

TEXASARCHITECT

3 / 4
Public Buildings
1993

On the cover: Interior of the central gallery at the new Texas Capitol Extension in Austin (see pp.42-45). Photograph by Joe Aker of Aker Photography, Houston.

Buried Treasure

3D/I was lead architect on the light-filled underground office complex that will relieve overcrowding among legislators and their staffs while it clears the way for restoration of the historic Texas Capitol. *by Joel Warren Barna*

The Power and the Glory

*T*A contributing editor Willis Winters describes the powerful new Federal Reserve Bank headquarters in Dallas.

Irving Justice

Hellmuth, Obata & Kassabaum of Dallas folded the police and courts buildings around a courtyard in their new Criminal Justice Center for the City of Irving. *by Joel Warren Barna*

Money Maker

Kirk Voich Gist of Fort Worth designed a new facility for the federal Bureau of Engraving and Printing that combines the two aspects of the agency's program. *by Susan Williamson*

Dome Alone

Marmon Mok of San Antonio headed the design team for the new Alamodome, which will bring stadium seating and the opportunity for economic development east of the freeway that walls in downtown San Antonio. *by Susan Williamson*

Station House

Brinkley Sargent Architects planned a new police station in a high-crime neighborhood for easy access by area residents and for future expansion. *by Johanna Rowe*

| | |
|---------------------------------|-----------|
| Editor's note | 5 |
| Letters | 6 |
| News | 8 |
| Of Note | 9 |
| Calendar | 12 |
| Laws, Regs, and Red Tape | 22 |
| Masonry and Concrete | 28 |
| Special Advertising Section | |
| Survey | 60 |
| Products and Information | 65 |
| Resources | 66 |
| Marketplace | 67 |
| Small Practice Issues | 64 |
| TEXAS INDEX | 68 |



Pardon Us If We Drop Some Confetti In Our Drawers.

At McCoy, we're celebrating the coming together of Houston's two leading office furniture companies. And our enthusiasm is certain to show. Because under the new McCoy banner, we're combining our company's resources with the office furniture division of Wilson Business Products. This means that everything you've come to expect from the city's two premier office furnishings suppliers will now be available with one simple call.

You'll have more specialists than ever to help you create and maintain the perfect business environment. Experts in furniture and accessories. Installation and relocation. Service and maintenance. Product refurbishment. Facilities space planning. And that's just the beginning.

If you think that's something to celebrate, we couldn't agree more. And we expect you'll find evidence of that in everything we do.

There's Nothing Like The Real McCoy.

McCoy INC

611 WEST 38TH STREET / HOUSTON, TEXAS 77018 / TEL: 713/691-2417 / FAX: 713/691-2844

Circle 51 on the reader inquiry card

AIA Trust

Call to Save 55%

The AIA Trust has developed a lower cost health insurance alternative that's especially designed for small firms and sole proprietors.

Called the Capital Saver Plan, the premiums are up to **55% lower** than other plans. Yet it has excellent coverage to protect you financially from the high cost of medical bills for major illnesses and injuries.

In addition to \$1,000,000 of major medical coverage, the Capital Saver Plan also includes life insurance and accidental death and dismemberment coverage. Plus, you can choose to include dental/orthodontia and disability benefits for even more comprehensive protection.

To receive a free information kit about the AIA's Capital Saver Major Medical Plan, just call **TOLL FREE**

1-800-343-2972



The American Institute of Architects
Benefit Insurance Trust

Circle 14 on the reader inquiry card

Texas Architect (ISSN: 0040-4179) is published seven times per year (bimonthly and in April) by the Texas Society of Architects, 114 West Seventh, Suite 1400, Austin, Texas 78701. TSA is the official Texas state organization of the American Institute of Architects (David Lancaster, Executive Vice President). Copyright 1993 by the Texas Society of Architects.

Joel Warren Barna **Editor**

Ray Don Tilley **General Manager**

Susan Williamson **Associate Editor**

Carolyn Baker 512/929-9018 **Advertising Representative**

Billie Dixon 512/454-6681 **Advertising Representative**

Katie Larson 214/931-1111 **Advertising Representative**

Linda Langan **Marketing Assistant**

Kimberly J. Burns **Membership Director**

Irene Garza **Controller**

TSA Publications Committee

William L. Peel, AIA, Houston (chairman); Lawrence H. Connolly, AIA, Midland; Vincent Hauser, AIA, Austin; Gilbert Hoffman, AIA, Houston; Martin J. Harms, AIA, Lubbock; Rebecca Renfro, Houston; C. Mark Seiley, AIA, Dallas; Ed Soltero, Assoc. AIA, El Paso; Dennis W. Stacy, AIA, Dallas; Bill T. Wilson II, AIA, Corpus Christi

Contributing Editors

David Dillon, Dallas; Stephen Fox, Houston; R. Lawrence Good, FAIA, Dallas; Douglas Harvey, San Antonio; Nestor Infanzón, AIA, Dallas; Barbara Koerble, Fort Worth; Craig Kuhner, Arlington; Gerald Moorhead, FAIA, Houston; Lila Knight, Austin; Willis Winters, AIA, Dallas; David Woodcock, FAIA, RIBA, College Station

TSA Officers

James D. Tittle, FAIA, Abilene, President; David Messersmith, Midland, President-Elect; Robert A. Brooks, AIA, Houston, Vice President; Jan Pittman, AIA, Dallas, Vice President; Randy Gideon, AIA, Fort Worth, Vice President; David Richter, AIA, Corpus Christi, Vice President; Tommy Cowan, AIA, Austin, Treasurer; Paul Hesson, FAIA, San Antonio, Secretary; David Lancaster, Austin, Executive Vice President

TSA Board of Directors

Richard Buzard, AIA, Abilene Chapter; Thomas L. Lavin, AIA, Amarillo Chapter; Chuck Croft, FAIA, Austin Chapter; Tom Parker, AIA, Brazos Chapter; Bill T. Wilson II, AIA, Corpus Christi Chapter; Mark Watford, AIA, Dallas Chapter; James A. Wofford, AIA, El Paso Chapter; Lawrence E. Foxworth, AIA, Fort Worth Chapter; O'Neil Gregory, AIA, Houston Chapter; Teresa Morales-Best, AIA, Lower Rio Grande Valley Chapter; Danny D. McLarty, AIA, Lubbock Chapter; Stephen Kent Harris, AIA, Northeast Texas Chapter; J. Carlos Jones, AIA, San Antonio Chapter; William E. Nelson, AIA, Southeast Texas Chapter; Keith J. Bailey, AIA, Waco Chapter; James Rigen, AIA, West Texas Chapter; Conrad Staley, AIA, Wichita Falls Chapter; R. Lawrence Good, FAIA, Dallas, and John Only Greer, FAIA, College Station, AIA Directors; Lee Roy Hahnfeld, FAIA, Fort Worth, TAF Chairman; John Casbarian, FAIA, Educator Member; and Alexander Schult, Public Member

Second-class postage paid at Austin, Texas, and additional mailing offices. **Postmaster:** Send address changes to *Texas Architect*, 114 West Seventh, Suite 1400, Austin, Texas 78701. Phone: (512) 478-7386.

Subscription price is \$12.00 per year for TSA members, \$21.00 for nonmembers with addresses in the continental U.S. (nonmembers do not receive the *Practice Annual*). Reproduction of editorial content without written permission is prohibited. Use of names and images of products and services in either editorial or advertising does not constitute an endorsement by TSA or AIA, nor does comment necessarily reflect an official opinion of either organization. *Texas Architect* is indexed by the Avery Index of Architectural Periodicals, available in major libraries.

Public Projects, Public Policy

THE AGENCIES, boards, departments, and committees that charge architects with the commissions to design public building have expectations and budgets as varied as the constituencies they represent. On the high end, there is the Federal Reserve Bank, with the budget and the will to fund a new headquarters in Dallas that portrays its powerful role in the nation's monetary system. At the opposite extreme, perhaps paradoxically, is the Bureau of Engraving, which wanted a no-nonsense factory combination of manufacturing space and offices for its new North Texas plant. In between are other groups, ranging from the constantly fractious (like the Texas Legislature, which has recently moved into the new Capitol Extension in Austin) to the merely difficult (the city councils in Dallas and San Antonio, which funded, respectively, the Southeast Dallas Police Station and the San Antonio Alamodome). In this issue we present the work of six different firms who designed in response to the needs of six different public clients, showcasing a range of recent public work in Texas.

Also in this issue is Associate Editor Susan Williamson's News story about the low-income housing crisis in Texas. It presents the findings of a report by a Washington, D.C.-based advocacy group about the national need for low-income housing. The report shows that the four cities in the country with the worst quality of housing for low-income families are in a single state: Texas. The cities are Dallas, Fort Worth-Arlington, Houston, and San Antonio, which also rank among the worst in availability and affordability of such housing.

I chose the projects for the feature section because of interest in one or more aspects of the projects—plans, materials, details, overall design. I had no thought, when choosing them, that these government projects would overlap so shockingly with the news about low-income housing and the almost complete abdication of responsibility by local, state, and federal officials in the matter. It is time to ask more questions about the priorities for public spending at every level of government in Texas.

Joel Warren Barna

UPCOMING ISSUES:

We invite submissions to **TEXAS ARCHITECT** for all our upcoming issues. Scheduled issue themes for the remainder of 1993 include

APRIL: PRACTICE ANNUAL (deadline past)

"The Quality Movement and Architecture"

MAY/JUN (submissions deadline 26 Feb)

"Health Care: Responding to the funding crisis"

JUL/AUG (submissions deadline 1 Apr)

"New Museums in Texas"

SEP/OCT (submissions deadline 1 Jun)

"Annual Review of Texas Architecture"

NOV/DEC (submissions deadline 1 Aug)

"New Churches for a New Decade"

We also need stories about new architectural projects, historic preservation, urban design, zoning, mass transit and highway development, competitions, and education for our **NEWS** and **SURVEY** sections. In addition, we are looking for stories about innovations in technique and management for our **SMALL PRACTICE** **ISSUES** section.

If you can help us with any of these topics, please call **TEXAS ARCHITECT** at 512/478-7386. **JWB**

Letters

THE JAN/FEB 1993 issue of *Texas Architect* is superb! Your article, "Competitions and Brokers," broaches an issue that has plagued this profession for years on end. That followed by Jack McGinty's Laws, Regs, and Red Tape (to be a regular feature, yet!) gave me hope that eventually architects will come down from the atelier and learn to slug it out in the street with those who use and abuse us so handily. Practice has become equal in importance to Design in the minds of architects who want to survive. Keep it up!

Then there was good friend Frank Welch's excellent dissertation on Philip Johnson and his Texas connections. Robin Leach's "Lifestyles of the Rich and Famous" has certainly missed out! I have always wondered if Philip ever waited in line after 10 p.m. to explain his qualifications to a country school board or a Methodist church with the desire to build a Gothic cathedral for \$75,000.

Heck, I even liked the book reviews! Frank Lloyd Wright's complex life and James Pratt's marvelous "Dallas Visions for Community"

are worth anybody's time. Good work! Now, if you only had a humor column on the back page...

David R. Braden, FAIA
Dallas

Editor's note:

The photograph of the Botanical Research Institute of Texas (right) in Fort Worth, designed by Halbach-Dietz Architects of Fort Worth, was omitted from page 17 of *TJ* Jan/Feb 1993.



THE CREDITS FOR the Lower Colorado River Authority General Office Complex (*TJ* Jan/Feb 1993, p. 63) were omitted. They are: ARCHITECT: RTG Partners, Inc., Austin; CONSULTANTS: The Broussard Group (landscape architect); Datum Engineering (structural); Michael E. James and Associates (mechanical, electrical, and plumbing); Murfee Engineering Company (civil); Jancom, Incorporated, (telecommunications); Proline Video (audio/video)

Cast bronze or cast aluminum signage from OMC Industries.



Made in Texas. Made to last.



OMC Industries, Inc.
P. O. Box 3188
Bryan, TX 77805
1-800-488-4662
FAX 1-409-779-4900

Call or fax for a catalogue and pricing guide.



For more information, visit one of the centers listed below, or circle 4 on the reader inquiry card

AUSTIN

Marvin Windows Planning Center
2120 Denton Drive, Suite 109
Austin, Texas 78758
800/333-9203 512/835-9203
Attn: John Faulkner
Bryan/College Station 800/333-9203
Temple/Belton 800/333-9203

DALLAS

Marvin Windows Planning Center
2619 Lombardy Lane
Dallas, Texas 75220
800/888-3667 214/351-1186
Attn: David Faulkner
Waco 800/883-3667

FORT WORTH

Marvin Windows Planning Center
5801 Curzon, Suite 1F
Fort Worth, Texas 76107
800/955-9667 817/737-8877
Attn: David Reynolds

HOUSTON

Lone Star Plywood and Door Corp.
16001 Tomball Parkway
Houston, Texas 77086
800/934-3502 713/440-9090
Beaumont/Port Arthur 800/934-3502
Bryan/College Station 800/934-3502

LONGVIEW

Marvin Windows Planning Center
1707 Loop 281 West
Longview, Texas 75604
800/288-3667 903/759-9675
Attn: Lonnie Robinson
Tyler 800/283-3667

LUBBOCK

Frontier Wholesale Co.
833 East 40th
Lubbock, Texas 79404
800/444-3667 806/744-1404
Attn: David Thompson

SAN ANTONIO

The Fisher Millwork's Home Design Center
6450 Camp Bullis Road
San Antonio, Texas 78257
800/669-0914 512/698-0914
Attn: Jan Salinas
Corpus Christi, McAllen, Brownsville
800/669-0914
Attn: Harry Armenia
Kerrville, Laredo 800/669-0914
Attn: Jan Salinas

TULSA

Marvin Windows Planning Center
5700 E. 61st St., Suite 105
Tulsa, Oklahoma 74136
800/283-6352 918/481-6352
Attn: Tom Braswell

OKLAHOMA CITY

Marvin Windows Planning Center
116 E. Sheridan, Suite 100, Bricktown
Oklahoma City, OK 73104
800/766-4690 405/235-5633
Attn: Gary Dawson

WINDOWS THAT BRING OUT THE ARTIST IN YOU.



Pinnacle Country Club, Cedar Creek Reservoir
designed by Frank Welch and Associates, Dallas

Sometimes the simplest notions can stir your imagination. Take an awning window. It's a simple idea: Turn a crank and let the outside in. But when you add another awning window to make a pair, and then combine several pairs along one facade, your design takes off. Marvin invites you to indulge your imagination.

Either by itself or coupled with Marvin's Picture or Casemaster units, Marvin's Awning window is ideal for creative window design.

Marvin Awnings open at the bottom to provide fresh air without letting in undesirable elements. Roto gear operators and concealed hinges provide smooth operation. Glass is held in place with removable stops for ease of repair. For security, Awnings feature cam locks (two on units over 32" in height or width). Awnings come standard with 3/4" insulating glass for energy efficiency. Dual leaf and bulb weatherstripping all the way around cuts air infiltration, and optional Low E with Argon further saves on energy expenses.

Marvin manufactures economical standard sizes and custom originals in every style imaginable. And every window, custom or standard, is made one at a time to your specifications.

And Marvin's service will put you at ease, no matter what you design. So push a simple idea—it may just bring out the artist in you.

"Thanks to Marvin Windows' greater selection of stock units, we were able to achieve a classic fenestration on this project without wrecking a tight budget.

"Although the approach to windows here is not attention-getting, the regular repetition, with modular windows based on the colonnade, is just what we wanted.

"Marvin Windows and their local distributor helped us succeed. They're great to work with because of the knowledge and attention their representatives provide."

— Frank Welch, FAIA, Dallas



MARVIN WINDOWS

Circle 4 on the reader inquiry card

News

House of Pain 8
WASHINGTON, D.C. A national study of low-income housing ranks Texas cities near the bottom in several categories.

A Cooperative Effort 8
AUSTIN Texas architects must work together to protect their interests during this legislative season.

A Roadside Attraction 9
DALLAS HOK's work on the reconstruction of North Central Expressway may mean more work for architects statewide.

Of Note 9

Rising from the ashes 14
HILLSBORO Hill County says it will rebuild its historic courthouse, which burned on New Year's Day.

Calendar 16

Mayan Treasures 16
AUSTIN A collection of architectural drawings of Mayan sites has been donated to UT Austin.

The Zoning Game 21
HOUSTON AIA /Houston is concerned about the city's proposed zoning ordinance.

House of Pain

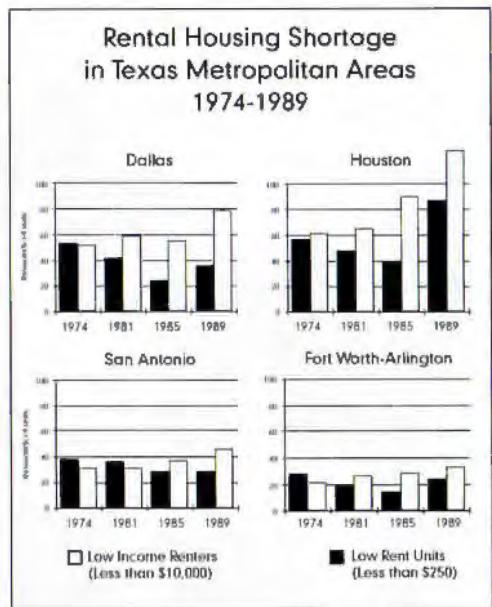
WASHINGTON, D.C. The quality of low-income housing in four Texas cities is the worst in the nation, and the same four cities rank among the worst in availability and affordability of such housing, according to a national study published late last year.

The study, prepared by the Center on Budget and Policy Priorities, of Washington, D.C., ranks four Texas metropolitan areas—Dallas, Fort Worth-Arlington, Houston, and San Antonio—at or near the bottom in a number of measurements of low-income housing availability, affordability, and quality. The study was based on a survey of housing conditions in 44 metropolitan areas sponsored by the U.S. Department of Housing and Urban Development. The study draws on information collected between 1986 and 1989.

According to the study, affordability and availability pose the same problems in the Sunbelt cities of Texas as they do in the Northeast, says John Henneberger of the Texas Low Income Housing Information Service, an Austin-based group that analyzed the study's findings. The study lets Texas compare itself to other areas, he says, and the obvious conclusion is that Texas is coming up short.

Large numbers of poor Texans, both renters and homeowners, live in physically deficient housing, the study says. (A household was considered poor if its annual income was \$10,000 or less, in 1989 dollars.) The four Texas cities included in the study ranked first through fourth in the rate of owner-occupied housing found to be physically deficient (in descending

order, San Antonio, Fort Worth-Arlington, Dallas, and Houston). The 44-area median was approximately 6 percent, while in all four Texas cities the rate was greater than 30 percent; in



The rental housing shortage in Texas cities for households earning \$10,000 or less (in 1989 dollars) rose sharply from 1975 to 1989.

San Antonio, more than 50 percent of housing occupied by low-income homeowners was substandard. In addition, three of the ten cities

"Housing," continued on page 12

Setting priorities

AUSTIN During this legislative season, Texas architects need to work to help educate their elected officials about the issues, says Ronnie Wooten, chairman of the Texas Society of Architects' (TSA) Government Affairs Committee. Such involvement is the only way TSA's legislative priorities can be met, he adds.

The priorities recommended by the Government Affairs Committee for this session of the Texas legislature, which runs through May, are

- to obtain a change to the state's Elimination of Architectural Barriers program to allow locally contracted reviewers (including architects) to examine and approve plans for EAB compliance;
- to support passage of fire safety officials' initiative to allow county adoption of building codes;

- to address indoor-air-quality issues;
- to support funding of public building programs to improve the state's infrastructure;
- to support improved funding for the arts;
- to avoid a professional services tax;
- to address issues related to the Practice Act, including fees charged by the Texas Board of Architectural Examiners, particularly for those not actively practicing architecture; and clarification of an architect's required role in publicly funded building projects; and

• to protect qualification-based selection; Wooten says bills supporting bidding for architectural services are expected to be introduced.

With the practice of architecture under pressure from a number of sides, this legislative session may be the most important in years, Wooten says, and involvement of Texas architects at all levels is critical.

Susan Williamson

A Roadside Attraction

DALLAS The Texas Department of Transportation broke with tradition when it hired an architecture firm to work on the reconstruction of 10 miles of North Central Expressway in

ements with the most impact, Retzsch said; HOK also worked with major property owners and civic organizations to supplement the project with additional landscape and streetscape development.



Dallas, but the experience has been so successful that it may change the way the department does business across the state.

In the past, the Department of Transportation has rarely hired architects to work on its projects, said John Kelly, North Central project manager for the DOT. However, a long controversy about how to increase North Central's capacity led to a negotiated agreement that included a commitment to employ a design team to oversee the visual aspects of the job. The DOT and the city of Dallas in 1987 hired the Dallas office of Hellmuth, Obata & Kassabaum to prepare a design plan for the North Central project; the reconstructed expressway will replace an obsolete four-lane road with an eight-lane facility from downtown north to I-635. Construction began on the first of five segments in 1989 and should be completed by 1997.

HOK worked with landscape architects the Slaney Santana Group of Dallas, urban designers Carr Lynch of Boston, and civil engineers from Lockwood Andrews + Newnam of Houston; the team defined design guidelines for all visible elements of the new expressway: retaining walls, bridges, lights, signage, streetscape, and landscape. The HOK team developed a design that provides continuity for the entire 10 miles of the project, but that also allows for variations reflecting the changing character of the areas through which the expressway passes, according to Dave Retzsch, HOK project manager. The \$10 million allocated by DOT and the city to pay for these "amenities" was spent on el-

A state official says that HOK's work on the reconstruction of North Central Expressway in Dallas may open doors for architects statewide.

The DOT's Kelly said that, although there was some initial skepticism about adding architects to the team, the results have been gratifying. "We feel like we're in the process of creating new standards here," he said. "We've learned things from this process that I think may end up being applied across the state."

Kelly said that he foresees more willingness on the part of the DOT to contract with design firms in the initial stages of a project, "rather than just doing the bare minimum" by hiring someone to add landscaping or other final touches at the end of a project.

The passage of the federal Intermodal Surface Transportation Efficiency Act (see "News," *TA*, Mar/Apr 1992) may also increase involvement of architects in highway design projects, Kelly said. Ten percent of ISTEA allocations are earmarked for "enhancements," just the kind of things HOK and the rest of the design team added to the North Central project. "I think ISTEA will prove to be a vehicle to getting this kind of design input into future projects," Kelly said. *SW*

OF NOTE

UT names new architecture dean

The University of Texas announced in January that Lawrence Speck will be the new dean of the university's School of Architecture. Speck, a UT faculty member since 1975, has served as interim dean since June. He currently holds the Roland G. Roessner Centennial Professorship and was founding director of UT's Center for the Study of American Architecture. Speck replaces Hal Box, FAIA, who resigned as dean last spring after serving for 16 years.

Rep. Brooks honored by AIA

U.S. Rep. Jack Brooks of Beaumont is the 1993 recipient of the American Institute of Architects' Thomas Jefferson Award for Public Architecture. Brooks, an AIA honorary member, has been committed to public architecture for 20 years, the jury said, beginning in 1972 with his championing of the law requiring federal agencies to use qualifications-based selection of architecture services.

Piano to design new Menil space

Houston's Menil Collection has commissioned Italian architect Renzo Piano to design a new gallery to be located on land adjacent to the existing museum, the HOUSTON CHRONICLE reported in January. The gallery will house works by abstract painter Cy Twombly. Piano designed the main museum building, completed in 1987.

P/A honors two in Texas

Two Texas firms were among 20 winners in the 40th annual P/A Awards program. James Pratt Architecture/Urban Design, Inc., of Dallas, won a citation for urban design for "Dallas Visions for Community," a 50-year plan for urban Dallas (see "Survey," *TA*, Jan/Feb 1993). Rob Civitello & L. Philip Schowen/OAD, of Houston, won a citation for architectural design for a riverside vacation house in Comal County. The projects were published in the January issue of PROGRESSIVE ARCHITECTURE.

5th Annual Graphics Competition

**Entry
Deadline:
April 30,
1993,
5:00 p.m.**

The *Texas Architect*
Graphics Competition
recognizes outstanding work
by Texas architects
as exhibited in drawings,
renderings, sketches, and
other two-dimensional media.
Entrants are judged on the
quality, style, and
effectiveness of
graphic design and
presentation, rather than on
the merits of any projects or
details presented.

Facing Page: "San Fernando at
Midsummer," a winning entry in the
1st Annual Graphics Competition,
rendered by Matthew K. Morris, AIA,
of San Antonio.

CATEGORIES:

- **ARCHITECTURAL DELINEATION.** Renderings and presentation drawings produced for an actual project, built or unbuilt.
- **WORKING DRAWINGS.** Any drawing from construction documents for an actual project, built or unbuilt.
- **CONCEPT AND IMAGINATION.** Conceptual sketches, schematic drawings and diagrams, and drawings of imaginary projects or places.
- **SKETCH BOOKS.** Drawings and sketches of landscapes, cityscapes, and existing buildings, spaces, and building details. Sketches may be entered individually, as a group, or as a complete sketch book.
- **PUBLICATION GRAPHICS.** Actual printed pieces of books, reports, studies, proposals, magazines, brochures, and similar printed media.
- **BUSINESS GRAPHICS.** Actual printed pieces of corporate and personal stationery, logos, announcements, advertisements, cards, posters, and similar printed media.

Each entry must be submitted in only one category. *Texas Architect* reserves the right to reclassify inappropriately labeled entries.

MATERIALS. For *Architectural Delineation*, *Working Drawings*, *Concept and Imagination* categories, submit one slide for each entry. A second, detail slide of the same artwork can be included. High-quality duplicate slides are acceptable. The original work or an original 35mm slide or 4x5 transparency must be available for publication should the entry receive an award.

Entries in the *Sketch Books* category may be entered in one of three ways: (1) one slide of a single sketch or collection of sketches; (2) the original sketch book, for judging in its entirety; (3) the original sketch book, tagged for selected sketch(es) to be judged.

For *Publication Graphics* and *Business Graphics*, submit each entry mounted on one 20x30-inch foam-core or rigid illustration board, leaving a two-inch margin on all sides for hanging. Do not use glass. Heavy publications or graphics that are larger than 20x30 inches need not be mounted.

An entry that violates any rule may be disqualified. TSA staff will endeavor to resolve entry problems. However, entrants may not be notified of disqualifications, and in no case will entry fees be refunded.

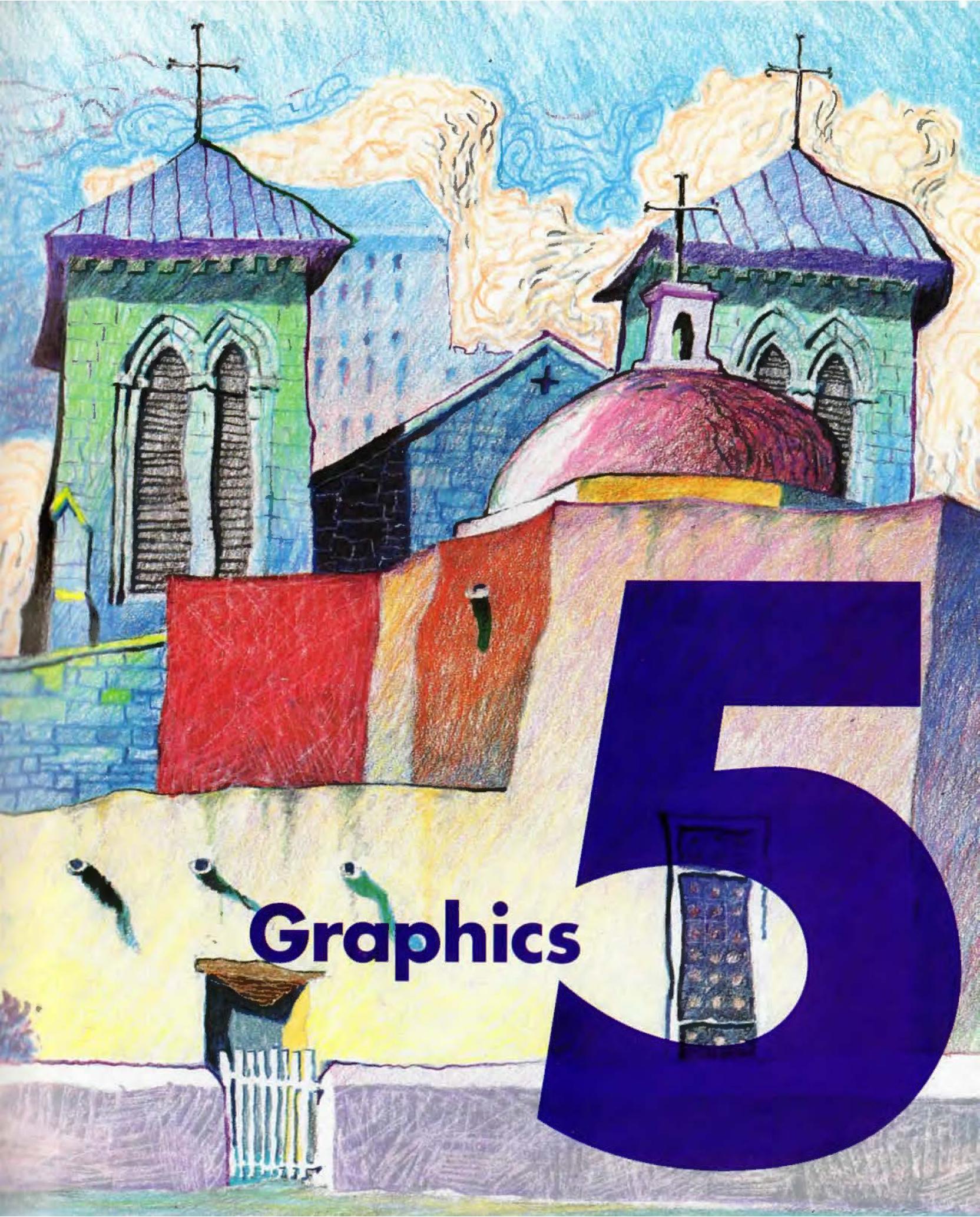
ELIGIBILITY. Eligible work must have been produced by (1) a current member, associate, or professional affiliate of the Texas Society of Architects, (2) an architect registered with the Texas Board of Architectural Examiners, or (3) a currently enrolled architecture student at the University of Houston, Prairie View A&M University, Rice University, Texas A&M University, University of Texas at Arlington, University of Texas at Austin, or Texas Tech University.

AWARDS. Given in each category to as many entries as the judges feel merit award. Each entry is judged on its own merits. The judges can choose not to name a winner in a category if they feel no entries merit award. Winning entries will receive the following:

- Certificate of award.
- Publication in *Texas Architect*.
- Promotion to other publications.

ENTRY FEE. A fee of \$45 for each entry by a TSA member, \$30 for each student entry, or \$75 for each entry by an architectural graduate or registered Texas architect who is not a TSA member, must be included with your submission. After judging, an additional payment of \$75 will be required for each winning color entry to help offset the cost of four-color reproduction in *Texas Architect*.

DEADLINE. All entry materials must be received by *Texas Architect* no later than 5:00 p.m., April 30, 1993. Entries are to be mailed or delivered to: Texas Architect, 111 West Seventh Street, Suite 1400 (Norwood Tower, 14th Floor), Austin, Texas 78701.



Graphics



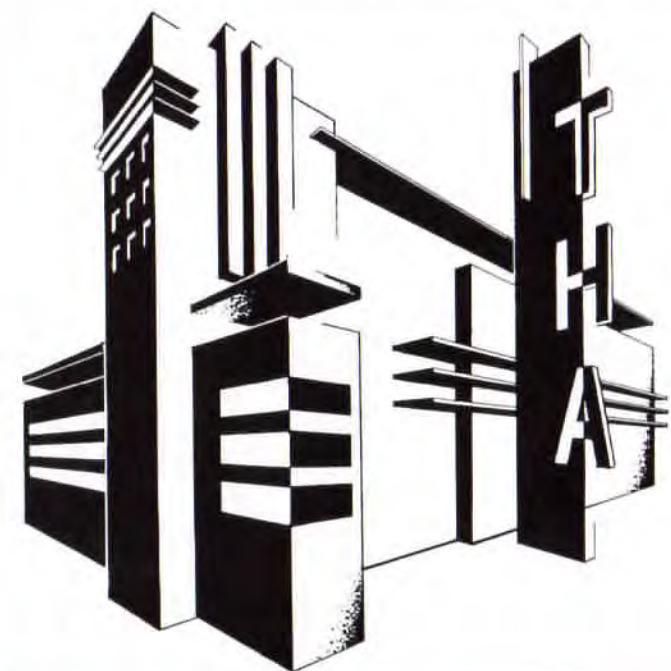
"Housing," continued from page 8

with the highest incidence of substandard low-income rental units were in Texas—San Antonio, the second highest, at 39 percent, Houston, third highest, at 32 percent, and Fort Worth-Arlington, ninth highest, at 20 percent. The 44-area median was just below 15 percent. (HUD defines a physically deficient dwelling as one that lacks hot or cold water, lacks a toilet, has malfunctioning heating equipment, or lacks electricity.)

The majority of poor Texans also paid more for this frequently inadequate housing than they could afford. Federal standards say that housing is affordable if it consumes no more than 30 percent of income. In Texas, most poor renters spent more than half of their income for housing—70 percent in Dallas, 69 percent in Houston, 59 percent in Fort Worth-Arlington, and 53 percent in San Antonio. The majority of poor homeowners also

faced affordability problems. In Houston, 84 percent of poor homeowners lived in unaffordable housing. In Dallas the rate was 75 percent, in Fort Worth-Arlington 64 percent, and in San Antonio 58 percent. Bad as these figures sound, they are below the U.S. average; nationwide, 84 percent of homeowners and 84 percent of renters lived in unaffordable housing.

The heart of the affordable housing crisis is revealed in statistics about availability of low-income housing. In 1974, the supply of low-income housing in Texas was greater than the demand for it in all areas except Houston, where there was a small shortfall. By the late 1980s, the need for low-income housing far outstripped the supply in all four Texas cities studied. The number of available units actually declined in all of the cities except Houston. However, the number of low-income renters increased at a much faster rate than the number of available units. The study found that, by the late 1980s, the nationwide ratio of low-income renters to available low-income units was 1.9 renters per unit. In Dallas, the ratio was 2.2, in



INVITATION TO DISPLAY ARCHITECTURE FOR HEALTH

1993 HEALTH CARE ARCHITECTURE EXHIBIT
JUNE 6-8 IN DALLAS

Showcase your latest innovations in health care facility design at the Texas Hospital Association's 1993 Convention & Exhibit Show, June 6-8 in Dallas. Participation in this exhibit introduces your firm to the planners and decision makers for health care facility construction and renovation projects.

For information, call THA's exhibits coordinator at 512/465-1017.



Sponsored by Texas Hospital Association in Cooperation
with Texas Society of Architects & American Hospital Association



"NATURALLY" THE BEST

MARBLE • SLATE
GRANITE • LIMESTONE

Accept No Substitutes

More Than 100 Varieties of
Natural Stone In Stock

- SHOWROOM
- WAREHOUSE
- FACTORY

14311 Reeveston Road
Houston, Texas 77039
TEL: (713) 590-1256
FAX: (713) 590-5352

- No Project Too Large
- No Project Too Small

Circle 42 on the reader inquiry card

San Antonio 1.6, and in both Houston and Fort Worth-Arlington 1.4 renters per unit.

The housing situation in Texas has reached its current state after years of budget cutting at the federal level and even more years of planning failure at the state and local level, says Henneberger. "The federal government for 12 years has punted to the state and local governments," he says. During the 1980s, federal housing budgets were cut as much as 90 percent compared to late-1970s levels. In other parts of the country, state and local entities picked up at least part of the housing burden, having developed programs of their own as well as systems for delivering the federal funds still available.

In Texas, Henneberger says, those programs and delivery systems were never developed. Texas depended completely on federal funds and programs and, following the federal budget cuts of the 1980s, low-income housing in Texas fell through the cracks. "There's no organized lobby for poor people's issues in Texas. No one has cared enough to get the bureaucracy in motion on these housing issues," he says.

MILLER
NOW OFFERS
TWICE THE
**SERVICE
SERVICE**

DOWNTOWN
501 W. 6TH ST.
AUSTIN, TEXAS
(512) 478-8793

NORTHSIDE
10713 METRIC BLVD.
AUSTIN, TEXAS
(512) 837-8888

SINCE 1920, COMPLETE
SERVICE TO ENGINEERING,
ARCHITECTURAL, AND
ASSOCIATED PROFESSIONS

MILLER
BLUEPRINT CO.

Circle 13 on the reader inquiry card

In fact, Henneberger says, Texas is not taking advantage of the limited federal funds that are available. Funds allocated to the state are often returned when the responsible state agency fails to distribute the money, he says.

This failure to keep potential federal funds in the state is one reason why the poor in Texas receive such a low rate of government housing assistance compared to the national average.

Houston had the lowest rate of housing assistance per capita of any city in the country, the study found. The poor are not the only victims of this funding failure, Henneberger says. Low-income housing funds coming into the state would pay for construction of low-income housing and that would benefit the whole economy, giving business to everyone from architects to lumber yards.

SW

Stephen D. Sprowls, CPCU
President

PLUS

**PROFESSIONAL LINES
UNDERWRITING SPECIALISTS, INC.**

We've been around—through boom and bust, since 1981, providing continuing professional advice and support to help you manage the risks associated with your profession. Let us be the PLUS in your professional liability program. TSA's source for professional liability insurance, through responsive insurers, including the DesignPLUS London Slip.

Professional Lines Underwriting Specialists, Inc.
4201 Bee Caves Road, Suite C-202
Austin, Texas 78746

(512) 328-8395 1 (800) 880-1019
Fax (512) 328-8121

Circle 12 on the reader inquiry card

Rising from the ashes

HILLSBORO The historic Hill County Courthouse was heavily damaged by fire on New Year's Day, leaving its clock tower collapsed and its interior gutted. The Associated Press initially reported that the courthouse was totally destroyed, but later review showed that the building is salvageable.

Although insurance will not cover the total cost of restoration, the county is "planning very decisively to rebuild," said Hill County Judge Tommy Walker. Initial structural engineering reports show that the walls are basically sound and that, although most of the wood and plaster was destroyed, the stone and mortar were mostly undamaged, he said. The county will do whatever it takes to "build it back better than ever," Walker said. As part of the rebuilding process, the county plans to install modern air conditioning, phone, and smoke detection systems.

The fire apparently started on the third floor, probably as the result of an electrical short, and moved up through the attic and into the bell tower, according to Gerron Hite, an architect with the Texas Historical Commission. The tower collapsed into the second-floor courtroom, leaving debris, including the 1,500-pound bell, in the ceiling of the first floor. Despite the extent of the damage, the county managed to salvage birth, death, and deed records



Courtesy Texas Historical Commission

Hill County is committed to rebuilding its courthouse; the historic structure was badly damaged by fire on New Year's Day.

going back more than 100 years, Walker said.

The Hill County Courthouse, completed in 1891, was designed by W.C. Dodson in an ornate interpretation of the Second Empire style for which he was known. Built of rusticated white limestone with contrasting smooth-cut limestone detailing for openings, cornices, and stringcourses, the building rose three stories to a mansard roof and was crowned with a graceful tower. The entrance was framed with two-story banded and fluted columns, topped by a pediment that was destroyed in the fire.

The Historical Commission will review restoration plans as they are developed, Hite said. State law requires such review for changes to any of the state's historic courthouses. *SW*

American Standard

Houston

Bellaire Plumbing Supply
7106 Atwell
Houston, Texas 77081
(713) 668-3060

San Antonio

San Antonio Plumbing Distributors, Inc.
1101 Broadway
San Antonio, Texas 78215
(512) 227-4546
(800) 777-9502

3115 N.W. Loop 410
San Antonio, Texas 78230
(512) 341-7141

1422 Bandera Rd.
San Antonio, Texas 78228
(512) 436-2988

2203 Danbury
San Antonio, Texas 78217
(512) 829-1721

VULCRAFT'S LATEST PRODUCT WEIGHS 24 OUNCES AND CAN SUPPORT OVER 150,000 ARCHITECTS AND OTHER BUILDING PROFESSIONALS.

For years, Vulcraft has been showing builders how to build stronger, faster and less expensively with steel joists, joist girders and steel deck.

Now every architect and engineer in the country can learn even more, thanks to *Designing With Steel Joists, Joist Girders and Steel Deck*.



To Order By Phone Call 1-800-443-1945

This 289-page, hard cover volume will show you the most innovative uses of these products. Chapters include roofs, floors, lateral load systems, special topics, specification of components, connection design and responsibilities. Just see the coupon for details.

YES, I want to learn the latest building design innovations with *Designing With Steel Joists, Joist Girders and Steel Deck*. Enclosed is a check or money order for \$50* per copy.

Name

Company

Address

City/State/Zip

Daytime Phone ()

*North Carolina residents please add \$3.00 sales tax. Send payment with coupon to: VULCRAFT BOOKS, INC., P.O. Box 669271, Dept. M, Charlotte, NC 28266-9271.

Bill my Visa or MasterCard Account:
Visa MasterCard (Circle One)

Card No. Exp. Date

Signature

Circle 80 on the reader inquiry card



HERITAGE

AMARILIS

Circle 8 on the reader inquiry card

American Standard presents the Amarilis Heritage™ collection, three handsome new handles that prove form goes hand in hand with function.

Heritage reinterprets traditional cross, lever and wrist blade designs with architectural flair. The result—three sleek new classics mounted on smoothly tapered pedestals, each a perfect complement to any setting.

The proven Amarilis system of solid brass construction and ceramic disc valving guarantees years of drip-free performance. Available in Polished Brass, Polished Chrome, White, Bone, or silky Matte Chrome.

Heritage; where performance, form and function create a new standard of value.

American Standard

CALENDAR

A&M Spring Lecture Series
Speakers will include Malcolm Quantrill (March 2 and 8); Kasia Broner-Bauer (March 3); Claes Cladenby (March 3); Alan Plattus (March 5); Alberto Perez-Gomez (March 26); and Michael Rotondi (April 2). Texas A&M Department of Architecture (409/845-1221)

"Renzo Piano: Selected Projects"
This exhibition, organized by the Architectural League of New York, will examine the work of Italian architect Piano, designer of Houston's Menil Collection and the Centre Georges Pompidou in Paris. Richmond Hall, Menil Collection, Houston (713/520-8512), MAR. 11 TO MAY 30

"Sustainable Community Solutions"
The AIA and the International Union of Architects are sponsoring an international competition focused on environmentally conscious building design. A total of \$50,000 in prizes will be awarded in three categories: energy and resource efficiency; healthy buildings and materials; and land use and urban ecology. Sustainable Community Solutions, AIA (1735 New York Ave., N.W., Washington, D.C. 20006), DEADLINE: APR. 1 (REGISTRATION); MAY 1 (SUBMISSION)

"Art from Sacred Landscapes"
This exhibition of pre-Columbian art and cultural objects—300 works of art from 17 cultures—examines the bond between these ancient cultures and their environments. Museum of Fine Arts, Houston (713/639-7300), THROUGH APR. 18

"Computer Graphics Solutions"
The 14th annual conference dedicated to computer graphics applications for engineering and business will be held in Philadelphia and will feature 150 exhibitors and a program covering CAD/CAM/CAE, graphic design, architectural, and other applications. National Computer Graphics Association (703/698-9600), APR. 26-29

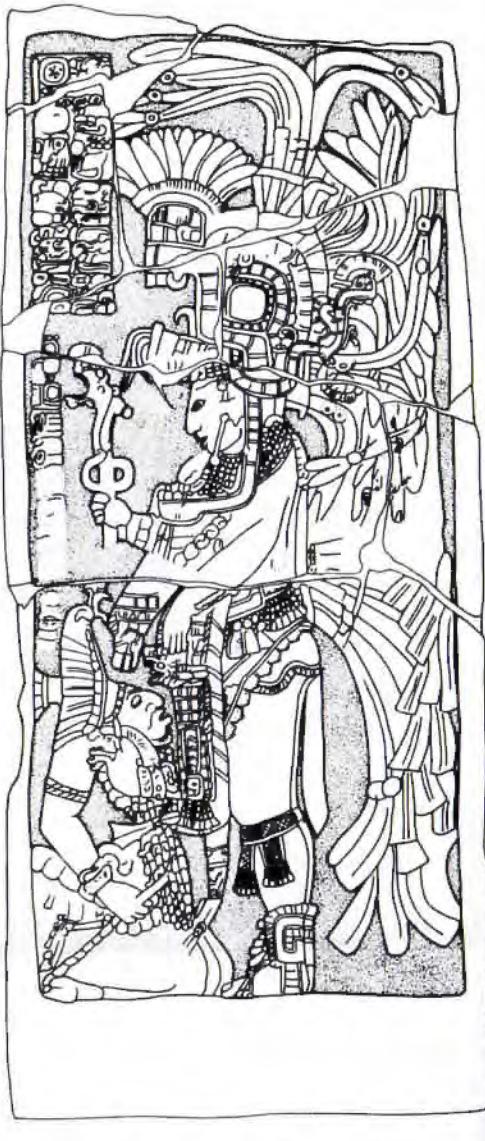
Mayan Treasures at UT

AUSTIN The historian George F. Andrews has announced his intention to donate his "Architectural Data Bank for the Lowland Maya" to the Architectural Drawings Collection at the University of Texas at Austin. This important research resource, one of the most comprehensive and detailed records of lowland Mayan architecture, includes documentation of more than 800 structures from 224 archaeological sites in the lowland Mayan area.

George F. Andrews, a professor emeritus of architecture at the University of Oregon, has devoted the last 32 years to documenting Mayan sites. Andrews first became interested in Mayan architecture after visiting a site in the late 1950s. Upon his return to the U.S., he found that there was very little information available about Mayan architecture. Accompanied by his wife, Gerrie, he began a lifetime of work to document as many sites as possible in the lower Mayan region in and around the Yucatan peninsula. "My idea was to visit all of the lower-region Maya areas and record everything I could, [which] turned out to be a very substantial project because the area is approximately the size of Oregon," Andrews says.

Andrews is the author of numerous works on Mayan architecture, including *Architecture and Archaeology* (1985) and the seminal study, *Maya Cities: Placemaking and Urbanization* (1975). In addition, he has published studies of individual sites, including Comalcalco in the Mexican state of Tabasco, and Edzna in the state of Campeche. Excavation at Edzna was begun in 1958 under Andrews's leadership and has continued periodically since that time. Andrews was recently awarded a silver medal by the Center for Architectural and Urban Investigations in the Postgraduate School of Architecture at the National Autonomous University of Mexico; he is the first U.S. citizen to be so honored.

The collection that Andrews has agreed to donate to UT includes approximately 2,000 measured drawings; 15,000 negatives and slides; and 5,000 typescript pages of descriptive data on the sites, including information about interior and exterior architecture, decorative features, and construction details. Andrews took great care in recording and organizing the material; he produced both drawings and descriptive data in a standardized format, thus providing comparative information for a multitude of sites. Most of the material is from sites



Drawing of stela from Bonampak, a Mayan site, part of the Architectural Data Bank donated to UT Austin

located in the central portion of the Yucatan peninsula, including the Puuc, Chenes-Puuc, Chenes, and Rio Bec regions. Sites such as Uxmal, Chichen Itza, Palenque, and Tikal are extensively documented.

By making this information available to scholars, Andrews will have made a significant contribution that will further the course of Mayan scholarship. The material offers a wealth of information for a variety of disciplines, including architectural history, anthropology, and archaeology, as well as the study of Maya hieroglyphics, a specialty of Linda Schele at the University of Texas' Mayan Workshops.

Lila Knight

Contributing editor Lila Knight is curator of the Architectural Drawings Collection of the University of Texas at Austin School of Architecture.

5 Reprints

TEXAS ARCHITECT

You can order copies of articles from Texas Architect at reasonable prices and in quantities as low as 100. Reprints are printed to the magazine's high standards in color or black-and-white, and will include your firm's logo, name, and address added at no charge. Some reformatting and custom layout are also available. For more information, call Publications Director Ray Don Tilley (512/478-7386), or circle 144 on the reader inquiry card.



Burlington State - Light Green Cleft. (Dallas, Texas)

ThornTree

Suppliers of Slate
and
Other Fine Natural Stones
for
Residential and Commercial Use

Wide range of colors available

■ HOUSTON
Main Office
713-686-8463

Showroom
713-963-9890

■ DALLAS
214-760-0099

Circle 44 on the reader inquiry card

Don't Forget Us!

Just because you are moving up, moving out, or simply moving on doesn't mean you have to miss *Texas Architect*. Fill out and return this notice six weeks in advance to 114 W 7th St, #1400, Austin, TX 78701. We'll make sure we move with you!

Please print clearly your new address here.

Name

Company

City, State, Zip Code

Memo

Attach mail label from current *Texas Architect* here.

WHEN SERVICE IS AS IMPORTANT AS QUALITY AND STYLE . . .

Dallas Door and Supply "teams" with Weyerhaeuser to provide the best in architectural doors and local service to meet the need of any Texas commercial project.

We're both proud to have "teamed" with Austin Commercial, Inc., on the Federal Reserve Bank and with Thos. S. Byrne, Inc., on the Western Currency Facility.

For help on your next project . . .

CALL US



DALLAS DOOR AND SUPPLY COMPANY
ARCHITECTURAL DOORS, FRAMES & HARDWARE

9009 Chancellor Row • Dallas, Texas 75247 • (214) 830-9783
Metro (214) 988-7164 • Fax (214) 630-2118



Weyerhaeuser

There Is No Equal.™

MARKETPLACE

Advertising in Texas Architect's Marketplace is available for \$80 per column inch, one-inch minimum; business cards are \$240. Ads may be line or display. Design and typesetting available at \$10 per column inch for each service. Rates net, not commissionable. Closing date is the 13th of the second month preceding publication date (for example, May 13 for July/August issue). Call 512/478-7386 for details.

Circle 147 on the reader inquiry card

Build Your Collection

Complete and return the adjacent postage-paid subscription card to receive every issue—all six regular issues, plus a bonus seventh issue, if you prepay. And save at least 13% off the cover price!

To Receive Free Graphics Competition

Use the entry form at right (or a photocopy) to enter the 5th Annual Graphics Competition. The official Call for Entries is on pages 10 and 11 of this issue. Last year's winners were profiled in the July/August, September/October, and November/December 1992 issues. Call Ray Don Tilley at 512/478-7386 if you have any questions about your entry(ies) or eligibility.

To Receive Free Product Information

Take advantage of additional information available about products and services advertised in this issue of TEXAS ARCHITECT. Simply fill out the information requested on the adjacent Reader Inquiry Service Card, detach it, and drop it in the mail, postage-paid. We will forward your requests to our advertisers immediately.

TEXAS ARCHITECT

Subscription Action Card Save by Subscribing to TA!

Start my savings with the next issue of TEXAS ARCHITECT! Please enter my subscription for the terms I've marked below:

- 1 year, 6 issues, \$21 13% off cover (Foreign: \$35/yr., U.S. funds)
- 2 years, 12 issues, \$38 21% off the cover
- Student rate, one-year, \$15 38% off the cover
- Payment enclosed. One free issue on a one-year subscription, 7 in all; or TWO free issues on a two-year subscription, 14 in all.
- Bill me.

Name

Title/Position

Firm/School

Type of Firm

Mail Address

City/State/Zip

Billing Address
(if different from above)

Primary business/industry (check only one):

- Architecture or A/E firm
- Engineering firm
- Architectural design (not headed by reg. architect)
- Interior design
- Landscape architecture
- Contractor or builder
- Government
- Commercial/Industrial/Institutional
- College personnel or library
- Architecture student
- Public library, professional club, society, or trade association
- Supplier of building or interior furnishing products
- Other allied to the field

Please specify:

If you are a registered architect, in which state(s) are you registered?

This card expires May 31, 1993. TEXAS ARCHITECT March/April 1993 Issue

ENTRY FORM 5th Annual Graphics Competition

Please type or print all information requested and sign the form in the space provided. This form (or a photocopy) must be attached to each entry. One check for the total fees must be attached to one entry.

Entrant Name

Firm/School

Address

City/State/Zip

Position/Class

Telephone

This is entry number of entries.

Title of Entry

Category (check one)

- Architectural Delineation Working Drawings
- Concept and Imagination Sketch Books
- Publication Graphics Business Graphics

Summary of Entries (enter total no. of entries and total fees on each card):

No. of entries x \$45 per TSA member entry =
 x \$75 per non-TSA architect entry =
 x \$30 per student entry =

Competition entry deadline: April 30, 1993.

I certify that I am currently a member, associate, or professional affiliate of the Texas Society of Architects (\$45 entry fee), a non-TSA architect registered to practice in Texas (\$75 entry fee), or an architecture student currently enrolled at the University of Houston, Prairie View A&M University, Rice University, Texas A&M University, University of Texas at Arlington, University of Texas at Austin, or Texas Tech University (\$30 entry fee). I executed the work being entered in this competition. I grant rights for one-time publication to Texas Architect, for which I will additionally reimburse Texas Architect \$75 per winning entry to help defray color printing costs. I understand that if I have not complied with all competition rules my entry may be disqualified without notification or return of entry fee.

Entrant's Signature

Date

IMPORTANT: Please complete the back of this form as instructed.

FREE PRODUCT INFORMATION Reader Inquiry Service

Please send free information about the products and services circled below:

Name

Firm/Company

Address

City/State/Zip

Position

Telephone

Please check the appropriate boxes below:

Job Function:

- Owner/Principal Intern Architect
- Manager/Dept. Head Designer
- Staff Architect Interior Designer
- Project Manager Engineer
- Client

Do you write or approve product specifications? Yes No

Type of Business:

- Architectural or A/E Firm
- Consulting Engineering
- Contractor or Builder
- Commercial, Industrial, or Institutional
- Government Agency
- Interior Design

Information Needed for:

- Current Project New Building
- Future Project Remodeling

Type of Contact Requested:

- Have your representative call me.
- Send more detailed technical information.
- Send samples or demonstration package.

| | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 |
| 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 |
| 61 | 62 | 63 | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | 73 | 74 | 75 |
| 76 | 77 | 78 | 79 | 80 | 81 | 82 | 83 | 84 | 85 | 86 | 87 | 88 | 89 | 90 |
| 91 | 92 | 93 | 94 | 95 | 96 | 97 | 98 | 99 | 100 | 101 | 102 | 103 | 104 | 105 |
| 106 | 107 | 108 | 109 | 110 | 111 | 112 | 113 | 114 | 115 | 116 | 117 | 118 | 119 | 120 |
| 121 | 122 | 123 | 124 | 125 | 126 | 127 | 128 | 129 | 130 | 131 | 132 | 133 | 134 | 135 |
| 136 | 137 | 138 | 139 | 140 | 141 | 142 | 143 | 144 | 145 | 146 | 147 | 148 | 149 | 150 |
| 151 | 152 | 153 | 154 | 155 | 156 | 157 | 158 | 159 | 160 | 161 | 162 | 163 | 164 | 165 |
| 166 | 167 | 168 | 169 | 170 | 171 | 172 | 173 | 174 | 175 | 176 | 177 | 178 | 179 | 180 |
| 181 | 182 | 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190 | 191 | 192 | 193 | 194 | 195 |

I would also like to subscribe to TEXAS ARCHITECT. Please bill me.

Card expires May 31, 1993. Mar/Apr 1993 Issue

A subscription to TEXAS ARCHITECT brings you up to date and enriches your career with each new issue.

When you take advantage of our free product information service, you can build and update your reference files quickly and easily.

Send in your cards today.

BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 3149 AUSTIN, TEXAS

POSTAGE WILL BE PAID BY ADDRESSEE

TEXAS ARCHITECT

114 W 7TH ST, STE 1400
AUSTIN, TX 78701-9833

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



Below, and on another sheet if necessary, briefly (no more than 100 words) describe the entry, including materials used and purpose. If the entry reflects an actual project, provide the project's name, location, client, and size; also explain the project's outcome.

Below, and on another sheet if necessary, briefly (no more than 100 words) describe the entry, including materials used and purpose. If the entry reflects an actual project, provide the project's name, location, client, and size; also explain the project's outcome.

Please mail this form along with your entry to TEXAS ARCHITECT, 114 WEST SEVENTH, SUITE 1400, AUSTIN, TEXAS 78701. If you have questions, call Ray Don Tilley, 512/478-7386. Entry deadline is April 30, 1993.



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 3149 AUSTIN, TEXAS

POSTAGE WILL BE PAID BY ADDRESSEE

TEXAS ARCHITECT

114 W 7TH ST, STE 1400
AUSTIN, TX 78701-9833



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES

TEXAS ARCHITECT

A Question of Zoning

HOUSTON Although AIA/Houston has supported plans for implementation of a zoning ordinance in Houston, the chapter in December made a public statement about its concerns regarding the ordinance development process.

The original goal of that process was to create zoning in tune with Houston and the unique way it operates, chapter president Frank Douglas, FAIA, told the city's Planning and Zoning Commission. That goal has not been met, he said. The process, particularly the development of zoning maps, was rushed, and the result, he said, is a lack of understanding of the big picture and an emphasis on parochial rather than community-wide interests.

The chapter is concerned that the impact of the zoning ordinance on property values in the city has not been sufficiently analyzed, Douglas told the commission. Houston's financial stability depends on property tax receipts, he said, and thus also on knowing, at least in a broad sense, what the zoning impact will be on property values.

The chapter also questions whether adequate funds have been allocated for enforcement

of the proposed ordinance, Douglas said, and believes that those funds must be identified before the ordinance is adopted.

Other areas of concern include the effect the ordinance will have on other public entities; the lack of public comment and input about the zoning maps that have been prepared; the restrictive nature of the regulations on the individual land owner and small developer; the fail-

ure to incorporate the 20 separate land-use ordinances referenced by the zoning ordinance into the zoning document itself; and the failure to prepare models of the real impact the zoning regulations will have on existing and future development in Houston.

The zoning ordinance had been scheduled for City Council action early this year, but that vote was delayed. *SW*

Go Native, Texan!



Native Texas Pecan

Texas architects who specify Native Texas Woods are not just patriotic. They're smart. Consider Pecan . . . the State Tree of Texas. Our Native Texas Pecan is 50% harder than Oak and 25% more stable. Pecan is highly colored and figured, making each piece a work of art. Excellent for flooring, paneling, countertops, cabinets, and tables. Let **Texas Kiln Products** show you Pecan's versatile beauty.

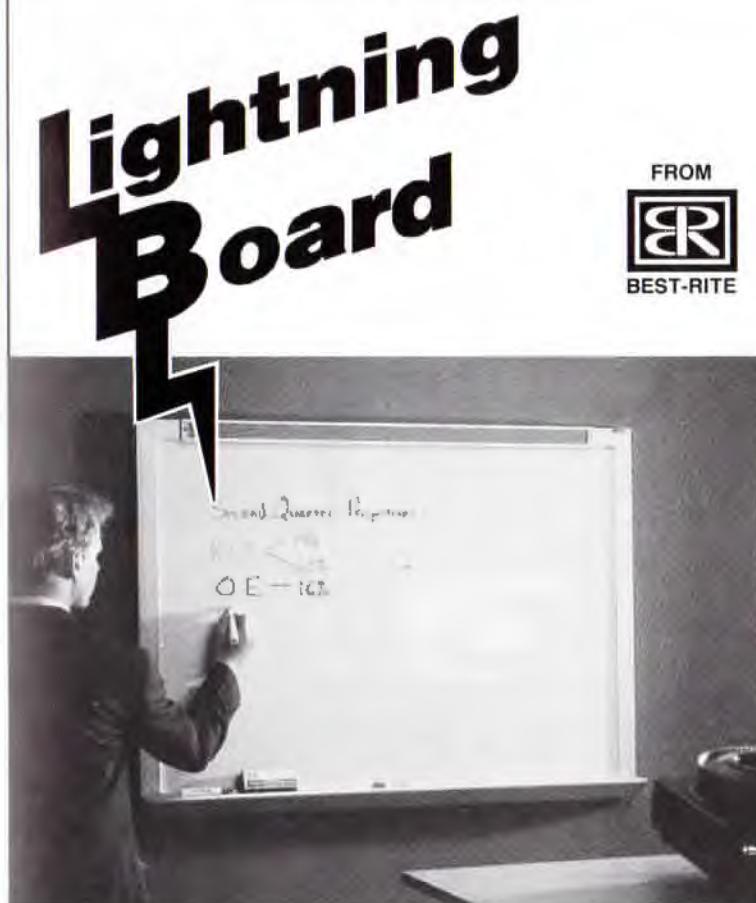
Also Mesquite, Blackjack Oak, Live Oak, Savannah Oak, Aromatic Red Cedar, Cypress, Sycamore, and many other "Native Texas Woods

Processors of the Treaty Oak
In the Lost Pines near Bastrop State Park
Call David Miller today: (800) 825-9158

Texas Kiln Products

Circle 106 on the reader inquiry card to get Texas Kiln Products' monthly bulletin, free!

Lightning Board



FROM
BEST-RITE

The Highest Quality Projection Markerboard & Chalkboard Available

ALL-PURPOSE SURFACE

- Projectable (low gloss)
- Pens / Pencils
- Chalk / Crayons
- Permanent Markers
- Dry-Erase Markers
- Accepts Magnetic & Adhesive Accessories

*Cleans and erases easily with a soft damp cloth
(Cleaning agents may be required for permanent markers)*

LIFETIME GUARANTEE

For more information, please call



BEST-RITE

MANUFACTURING

Since 1950

TOLL FREE 1-800-749-2258

(817) 697-4953 FAX (817) 697-6258
P.O. Box 713 • Cameron, TX 76520

ARCHITECTURAL PRACTICE

The *White Budd* Verdict

THE COURT CASE called *Major-Gladys Drive Joint Venture v. The White Budd Van Ness Partnership* constitutes a Sword of Damocles hanging over the head of every architect in Texas. The case originated when the Beaumont-based architects (now Budd Beets Harden Kolflat) approved a contractor's cost-savings proposal to substitute "C-tile" pavers for patterned concrete paving in a shopping center. The substituted pavers failed, and the owner sued both the architect and the contractor. Prior to trial, the owner settled with the contractor, who was dismissed from the suit.

The trial court found against the architect, and when the architect appealed, the Beaumont Court of Appeals, in September 1990, issued an opinion that changed the legal environment for every architect in Texas. The Court of Appeals upheld the trial court verdict and stated that the Texas Deceptive Trade Practices Act (DTPA) applied to professional architectural services. The Texas Supreme Court refused to rehear the case when the architects appealed.

Reading the Beaumont Court of Appeals's opinion with an architect's logic is a distressing exercise, but too many Texas architects are ignorant of what the case means and what they need to do in response.

As I was reading the court documents about the architect's appeal to the Supreme Court, the feature of the case that struck me most forcefully was that the Texas Supreme Court refused to overturn the Beaumont Appeals Court's decision *solely on the grounds that the lawyers for the architects filed a brief that exceeded 50 pages*. This apparently means that the Court rejected the architect's appeal without so much as weighing the arguments, or even reading them. Can they do this? You bet. It stretches credulity to know that such a rule supersedes truth and justice, but it is even more unbelievable that an attorney did not know about or believe the Supreme Court's 50-page rule (the lawyers then refiled the brief in smaller type, but the court rejected this as a subterfuge). In any case, the Supreme Court's rejection left the Beaumont Appeals Court's decision standing, although it was in conflict with an Austin Appeals Court decision in *Chapman v. Wilson* in

which a suit against a dentist was summarily dismissed on the grounds that professional services are exempt from claims under the DTPA.

The common issue in *White Budd* and *Chapman v. Wilson* is the proposition that there is an implied warranty that professional services will be provided in what is legally described as "a good and workmanlike manner,"—legality being a far cry from the common-sense understanding of such a phrase—and that failure to do so violates the DTPA.

Buck Dyess, as fine a lawyer as ever was, taught us at Rice in the '50s that the standard of care to which an architect or other professional must adhere to avoid malpractice consisted of exercising the same level of skill and judgment that was the norm for other architects in the area doing similar work.

The DTPA is different. Its stated purpose is to protect consumers against false, misleading, and deceptive business practices, unconscionable actions, and breaches of warranty. Furthermore, the law states these as strict liability provisions, requiring only proof of misrepresentations, even innocent misrepresentations, and requiring no proof of intent to deceive.

So what did the architect do that the dentist didn't? Aside from letting a contractor talk an owner into using C-tile instead of concrete pavers *they lived in Beaumont instead of Austin*, where the state appeals court, it seems, would have held in their favor.

The legal lynchpin of White Budd's defense was that the implied warranty of good and workmanlike performance of services does not apply to professional services in which the essence of the transaction is the exercise of professional judgment.

The Beaumont Appeals Court shot down that argument, but did so by citing a case, *Melody Home Mfg. Co. v. Barnes*, that would seem to have almost nothing to do with White Budd's argument. The *Melody Home* case concerns the manufacturer of modular prefabricated homes. The court, in citing it, leapt the gap between pre-fab construction and architecture in a single bound. In *Melody Home*, accord-



Reading the court's opinion in *WHITE BUDD* is a distressing exercise, but too many Texas architects are ignorant of what the case means and how they need to respond.

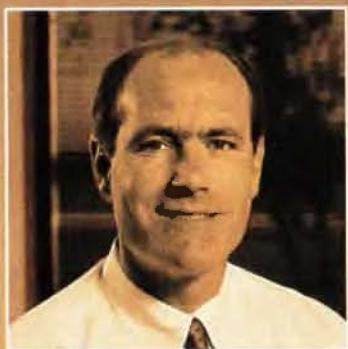
"The White Budd case," continued on page 26

*"We're very
comfortable
with
Hardishake.
It's a proven
product."*

*"Shake roofing is very
expensive to replace and fire
is a major concern."*

*"Hardishake's main attraction
is its Class "A" fire rating,
aesthetic appeal and
50-year warranty. It's really
gaining acceptance in the
Homeowners Association
market."*

*"We endorse Hardishake.
It's a proven product that's
been around a long time
and is backed by a large,
well established company.
We're very comfortable with
Hardishake."*



Thomas Fochelman
Vice-President
Davey Roofing
Irvin, California

Rugged Hardishake® fiber cement roofing won't burn and is immune to the damaging effects of moisture, termites, sun, heat, and even hurricane force winds. Hardishake is lightweight, yet can be walked on without breakage unlike most clay tile roofs.

Hardishake roofing offers real value over the competition, the durability of concrete combined with the beauty of wood. Its fiber cement composition provides the security and protection of a Class "A" fire rating. And its natural, wood-like appearance, exquisite color selection and unique installation options, such as blending and



staggering, add lasting beauty and value to any home.

Hardishake meets or exceeds major building code requirements and is backed by a transferable, 50-year limited warranty.

For more details on Hardishake and other James Hardie building products call
1-800-766-7094

HARDISHAKE®



James Hardie Building Products
A James Hardie Company
Building Confidence for Over 100 Years

10901 Elm Avenue • Fontana, CA 92335
Circle 47 on the reader inquiry card



© 1992 James Hardie Building Products, Inc.



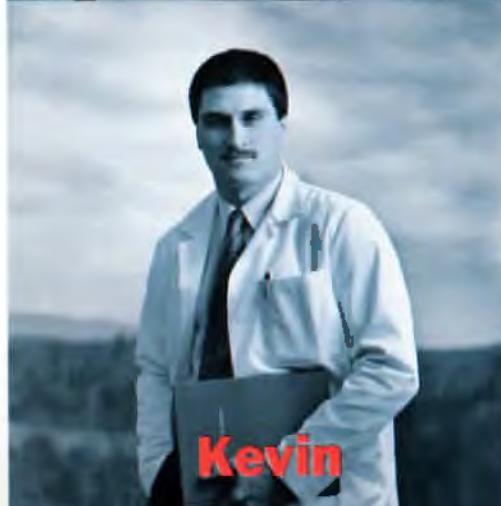
2



3



4



5

From top to bottom, the names behind the most durable roofing system in the industry.

That fellow below, on the left, is Kevin Willis. He's the Manager of Quality Control at Stevens Roofing Systems' \$12 million calendering facility. And he's instrumental in overseeing the quality of the industry's most successful white, single-ply roofing system: Stevens Hi-Tuff®. Which has proven its durability in some of the worst conditions Mother Nature has to offer. Namely, Hurricanes Andrew, Hugo, and Alicia.

The scrim-reinforced Hi-Tuff membrane utilizes DuPont's Hypalon synthetic rubber. It actually combines the best properties of both thermoplastics and rubbers, namely, it's hot-

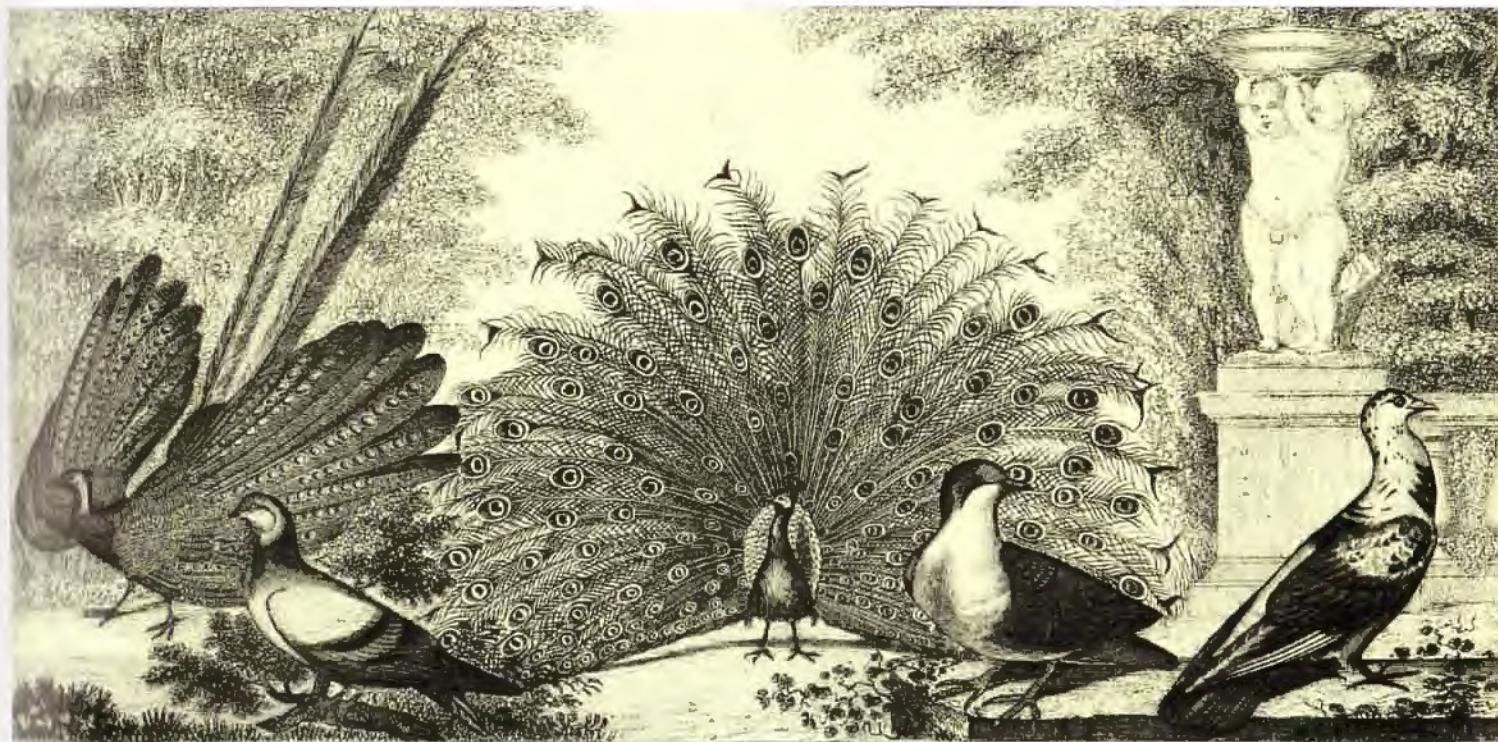
air weldability and excellent weathering characteristics.

Of course, the best membrane in the world needs to be put down so it won't come up. Which explains why we've developed and enforce some of the industry's most rigid specifications. Our picture framing sheet layout and tight fastening patterns, for instance, insures that your roof assembly lasts.

To find out more about the roofing system that's stood the test of time and the tests of Andrew, Hugo, and Alicia and Kevin, or to arrange a quote from an authorized Hi-Tuff applicator, just call Ann Duffy at 1-800-621-ROOF.

STEVEN'S
Roofing
Systems

It's Time to Show Your True Colors



Call for Entries

Celebrating its 39th year, the expanded TSA Design Awards Program seeks to recognize outstanding architectural projects by architects who practice in Texas and to promote public interest in architectural excellence. In the past, winning projects have been selected from every region of the state, as well as from other countries and

states. Winners have come from one-person offices and large firms and have ranged from simple one-room buildings to elaborate high-rise offices. This year all architects who are registered in Texas are invited to submit one or more entries for consideration by this year's jury. Out-of-state architects must enter Texas projects.

Judging will take place in June at the TSA Office in Austin. Winners and their clients will be honored by a special Awards Gala at the TSA Annual Meeting, September 16-18, 1993, in Fort Worth. Winning projects will be publicized statewide and featured in the September/October 1993 issue of *Texas Architect* magazine.

Look for full details in the May/June 1993 issue.

39th Annual TSA Design Awards

"The White Budd case," continued from page 22

ing to the Beaumont Court, the Texas Supreme Court had "forcefully noted that, during recent decades, the United States has shifted from a goods oriented to a service oriented economy and that, with this basic change, there has resulted a marked decrease in the quality of services."

Going on to cite Texas Supreme Court Justice Nowell in a 1968 case, they quoted his reasoning as applied to *White Budd*: "That court best serves the law which recognizes that the rules of law which grew up in a remote generation may, in the fullness of experience, be found to serve another generation badly, and which discards the old rule when it finds another rule of law represents what should be according to the established and settled judgment of society and no considerable property rights have become vested under the old rule."

Got that? In other words, they were extending the DTPO to professional services in order to redress a perceived, unrelated societal ill.

Aside from the outrage we might feel at the implication that our centuries-old profession

has no property rights vested in the learned exercise of its professional judgment and that our value to society is similar to that of a mobile home manufacturer, what can we learn from this? I suggest several things:

- Society is changing. We live in a world of increasing consumer expectations and we remain static at our own peril. Our performance must improve. There were some narrow fact issues in this case that resulted in jury findings of "unconscionable actions" on the part of the architect that may make the situation atypical.

- Performance in defending ourselves must also improve: Notably absent from the record was any offering of expert testimony by the defendant as to the role of the architect and the standard of care. At the same time, a key element in this case was the expert testimony for the plaintiff by an engineer who had spent his career in contracting. The Beaumont Appeals Court ruled that the fields of architecture, engineering, and construction overlap and intertwine to such an extent that this witness was perfectly qualified to state, without rebuttal,

that the architect's performance in the case failed to meet the standard of care.

- Reliance upon the law to protect us from unfair results is risky and speculative at best. The understanding of lawyers and judges about what architects do varies from county to county. We not only must perform better, we must do a better job of educating society as to the value of architecture.

- In the near term, we should, as a profession, bring our best efforts to bear on seeking a favorable Texas Supreme Court ruling on the issue of implied warranty. To do so will require the identification of a proper case and an effort by TSA to educate the lawyers involved and, if necessary, to bring informed testimony as to the distinction between trade practices and the application of learned professional judgment.

And do it in less than 50 pages.

John M. McGinty, FAIA

John M. McGinty of Houston is managing principal of American Construction Investigations, a forensic consulting firm.

TEXASARCHITECT

Circle the Number

It's quick. It's easy. It's free.

Tear off one of the cards on page 19. Then circle the reader inquiry number for each advertiser whose products or services are of interest to you. Add your name and address, mail it free to Texas Architect, or fax it to us at 512/478-0528 for fastest service, and relax. We'll take care of the rest. And soon you'll have the extra information you need.

TEXASARCHITECT



TEXAS SOCIETY OF ARCHITECTS

1993 Honors Program Call for Nominations

Each year since 1971 the Texas Society of Architects recognizes individuals and organizations outside the profession of architecture who share its commitment to the quality of life in Texas. Accomplishments by past honorees have included roadside beautification, wildlife conservation, open space protection, passage of laws protecting the public's health, safety, and welfare, downtown revitalization, preservation of historic buildings and sites, public-school programs emphasizing environmental concern, museum programs and exhibits about community architecture, and reporting, publications, and articles promoting the appreciation of the built and natural environment. In addition, TSA honors its exceptional members and distinguished Texas architectural educators for leadership and achievement.

Award Categories

Honorary Membership

Awarded to an individual for long-term association with architects and architecture in providing a better quality of life in Texas.

Citation of Honor

Awarded to groups or organizations whose activities make significant contributions to the goals of the architectural profession for improvement of the natural or built environment in Texas.

John G. Flowers Award

Awarded in memory of TSA's first executive vice president. Recognizes an individual or organization for excellence in promotion of architecture through the media.

Llewelyn W. Pitts Award

TSA's highest honor, awarded in memory of Llewelyn W. Pitts, FAIA, who served as TSA president in 1961 and was an influential and dedicated AIA leader. Recognizes a distinguished member for lifetime leadership and achievement in the profession of architecture and the community. Although no formal nominations are accepted, suggestions may be directed to the Honors Committee.

Distinguished Achievement in Architectural Education Award

Awarded to a distinguished architectural educator who has inspired others to excellence in architecture. Nominee must be a current or former member of the faculty of one of the seven accredited Texas schools of architecture, living at the time of nomination, and a full-time educator for at least five years. Criteria for selection will include evidence of the following: teaching of great depth, having a cumulative effect on a long line of students; teaching of great breadth, having influenced a wide range of students; and the ability to maintain relevance through the years by directing students toward the future while drawing on the past.

William W. Caudill, FAIA, Award for Young Professional Achievement in Recognition of Outstanding Service in Leadership Development

Awarded in memory of William W. Caudill, FAIA, recipient of the 1985 AIA Gold Medal and a pioneer of architectural design, practice, and education. Recognizes a TSA member who exemplifies qualities of leadership and service to the organization and community. Must be an AIA member in good standing and an active member of the local AIA chapter and TSA for a minimum of two years, not to exceed ten years (40 years of age is a recommended maximum for a nominee). The individual should be a role model to the organization with these qualities: goes beyond the call of duty in service to the profession; influences improvement in the organization at the state level; encourages participation among fellow members and nonmembers; exemplifies qualities of leadership; and exemplifies qualities of professional practice.

Nomination

Each nominee's submission should include: (1) completion of the nomination form; (2) illustrations (photos, publicity releases, other graphic material); (3) letters of recommendation from individuals outside the architectural profession (mandatory for Honorary Members limited to five letters; optional for other nominations); (4) letter of recommendation from chapter president (mandatory for Young Professional Achievement Award; optional for other nominations); (5) photograph of nominee (mandatory for Honorary Membership, John G. Flowers Award, Llewelyn W. Pitts Award, Educator Award, and Young Professional Achievement Award). Include all material in 8 1/2" x 11" plastic sleeves and submit in a ring binder. Reduce all oversize material to fit within sleeve.

Selection

The TSA Honors Committee will meet on June 11, 1993, to review submissions. After the TSA Board has taken action on the Honors Committee recommendations, winners will be notified by a letter from the TSA President. News releases will be originated by TSA.

Presentation

Awards will be presented during TSA's 54th Annual Meeting at The Worthington Hotel in Fort Worth, September 16-19, 1993.

Submission Deadline

All nominations must be received in the TSA Office no later than 5:00 p.m. on Tuesday, June 1, 1993. Nominations should be sent to:

TSA Honors Committee
c/o Texas Society of Architects
114 West Seventh, Suite 1400
Austin, Texas 78701
512/478-7386

Masonry & Concrete

New ideas from around the industry Companies present products and services

For the second year in a row, *Texas Architect* presents its Masonry & Concrete Special Advertising Section. We have given our industry suppliers and manufacturers this opportunity to show Texas architects, designers, and specifiers

their new products and services. Whether your project is large or small, our advertisers can help. After reading this section, if you have questions just note the "circle number" for the particular company that interests you

and circle that number on one of the reader inquiry cards you will find on page 19. Then just add your name and address and drop the card in the mail free to us. We will forward your request immediately.

Geometrics . . . Let your imagination soar®

You can capitalize on the design qualities of glass block and create bold geometric panels of light. Who would think such rigid building materials could be combined in so many ingenious ways? It's because **PC GlassBlock®** products come in several shapes, sizes and patterns—the only American-made glass block.

Alternating courses of squares and rectangles enlighten this under-the-stairs wall, turning a once-dark spot into a bright, inviting scene. Two different block designs combine to make the step-by-step motif even more interesting. The 8-inch squares are the clear VUE® pattern; classic DECORA 4" x 8" rectangles complete the picture.



Master Distributor of American-Made

PCGLASSBLOCK®



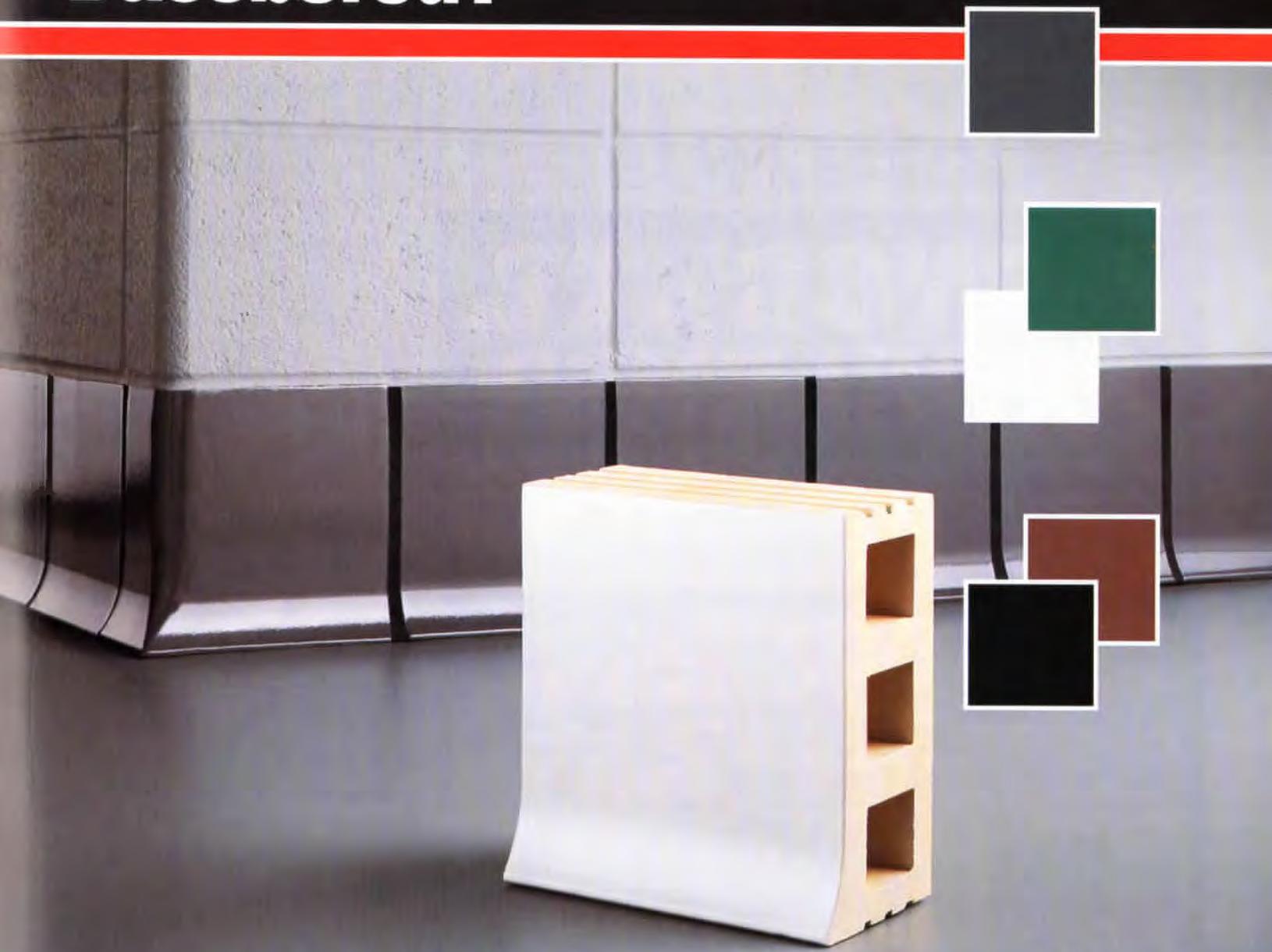
**MASONRY & GLASS
SYSTEMS INC.**

9189-F Winkler, Houston, Texas 77017
P.O. Box 87097, Houston, Texas 77287-7097
Phone: 713/944-9716 Fax: 713/944-1723

Circle 10 on the reader inquiry card

*Introducing Elgin-Butler's
New Modular Base System*

Basebored?



Get fresh inspiration from Elgin-Butler's new modular Isolated Ceramic Base System. A structural, durable, modular, glazed, ceramic answer to cove base applications. One that's just as functional and fitting with concrete block as it is with stud, plaster, brick or any other wall system.

This strikingly handsome, smooth glaze-finished ceramic cove base enhances carpet, terrazzo or marble. Or, add a permanent touch of scuff-proof glamor to

such utilitarian applications as linoleum or concrete floors. Available in cove or straight base, offering complete design flexibility.

No special masonry tools or techniques are needed. Standard $\frac{3}{8}$ " mortar joints achieve nominal $8'' \times 8''$ modular dimensions.

Get excited! Combine design aesthetics with durability and utility. Specify Elgin-Butler's new Isolated Ceramic Base System.

Check the Yellow Pages for our nearest sales office, or phone us today for complete information.

Elgin-Butler Brick Company
P.O. Box 1947, Austin, Texas 78767
(512) 453-7366



ELGIN-BUTLER

Over a century of family pride,
craftsmanship and accomplishment.

Circle 18 on the reader inquiry card



Signal Stone™

The only paver product that complies with the detectable warning and visual contrast requirements of the ADA.

From Pavex. Naturally.

1-800-937-2839

Circle 28 on the reader inquiry card

Pavex, Inc. • P.O. Box 1237 • Round Rock, Tx 78680

CONCRETE PROBLEMS?

Need help sealing, coating, staining, or waterproofing your concrete projects?

Secure Incorporated manufactures a complete line of concrete products that can help you overcome your problem and still keep you within your projected budget. If you need help, give us a call — maybe we can help.

SECURE INCORPORATED

1000 Lofland Drive
Waxahachie, Texas 75165
(214) 937-0800

Circle 34 on the reader inquiry card

Allied Marketing Services

Allied Marketing Services provides technical support for the incorporation of time-proven masonry and ceramic construction techniques that will perform successfully for the life of the structure.

Allied Marketing Services
800/541-2325
Buddy Beck

Circle 112 on the reader inquiry card

AMERICAN LIMESTONE COMPANY

American Limestone Company is Jimminey Cricket proud to have been specified as a possible stone supplier for the Walt Disney Concert Hall in California. The design, by architect Frank Gehry and Associates, is one which requires one of the most complex fabrications of stone to occur.

American's new state of the art stone fabrications facilities are becoming a reality in their Big Spring, Texas location.

Circle 9 on the reader inquiry card

Know it. See it.

Two nights. One roof...



Join us in Fort Worth this fall for the Texas Society of Architects' new, **streamlined** convention. It's our 54th Annual Meeting featuring quality **seminars**, an exclusive products exhibit complete with a **new products** gallery and exciting social events—all under **one roof** so you can see more and do more!

Worthington Hotel • September 16-18, 1993 • Fort Worth, Texas

Cold Spring Granite

Meeting and exceeding customers' needs are priorities for Cold Spring Granite's Texas sales reps.

Dan Stauty is responsible for northern Texas, as well as all of Oklahoma, Colorado, and Arizona. Stauty has been in the stone business all of his working life. His experience covers a broad spectrum of the stone industry, but he is most comfortable selling granite, the premier among stones.

Dale Klingsporn covers southern Texas and all of New Mexico, Louisiana, and Arkansas. His drawing and drafting management background provides the essential experience needed to work through detailing sessions with architects and designers.

Stauty and Klingsporn work closely with builders and architects to ensure that all Cold Spring granite provided for building projects is of the highest quality.

Circle 26 on the reader inquiry card

THE LARGEST MASONRY SUPPLIER IN SOUTH TEXAS



Concrete Pavers
Meets State Specifications...
Yours Too!

Valley
BUILDERS SUPPLY ^{inc}
BLOCK
& BRICK

P.O. Drawer Z • Pharr, Texas 78577
512 787-3223

STRUCTURAL GLAZED BRICK AND TILE

ELGIN-BUTLER BRICK: THE MATERIAL OF CHOICE FOR LANDMARK BUILDINGS SINCE 1873.

Today, after being passed down with pride and care through four generations, Elgin-Butler Brick remains a family-owned, family-operated and unabashedly all-American company. Our structural glazed brick and tile is an impervious, durable wall material exceptionally well suited for hospitals, correctional institutions, schools, restaurants, commercial buildings and manufacturing plants.

Circle 18 on the reader inquiry card



ELGIN-BUTLER

Over a century of family craftsmanship,
pride and accomplishment.



For more information, contact
Elgin-Butler Brick Company
P.O. Box 1947, Austin, Texas 78767
(512) 453-7366



**Masonry
Institute
of Texas**

P. O. Box 34583
Houston, Texas 77234

Circle 3 on the reader inquiry card



Windsor Stone™ is ideal for landscaping needs and small walls up to 3 ft.

Patent Pending

Diamond Wall™ offers creative flexibility for retaining walls 4 ft. and over.

U.S. Patent # 5,062,610

Segmental concrete retaining wall systems designed with ease of installation in mind.

- **Retaining Walls**
- **Tree Rings**
- **Terraced Walls / Gardens**
- **Planters**

Circle 17 on the reader inquiry card

Circle 17 on the reader inquiry card



PAVESTONE®
CO.
MODULAR CONCRETE BEAUTY™

700 Heritage Square I
4835 LBJ @ Dallas Parkway
Dallas, Texas 75244
1-800-245-PAVE or
1-800-580-PAVE (Texas Only)

Grapevine, TX: (817) 481-5802 Katy, TX: (713) 391-PAVE
Phoenix, AZ: (602) 257-4588 Las Vegas, NV: (702) 456-6292



Pavex

SignalStone from Pavex is the only paver product designed specifically to meet the requirements of Title III of the Americans with Disabilities Act. Because SignalStone is part of the Pavex integrated system of paver products, designers can comply with the specific requirements of the law without sacrificing design flexibility or aesthetic balance. And SignalStone can bring paved areas into compliance quicker and for less cost than other paving methods. SignalStone is manufactured with raised truncated domes that are an integral part of the paver, not a feature added after the manufacturing process.

Circle 28 on the reader inquiry card

Its a Natural!

What comes from Mother Nature in 9 distinctive colors?

Champagne
Antique Ecru
Subtle Saffron
Soft Salmon
Deep Salmon
Burnished Silver
Bronze Ruff
Silver Ruff
American Ecru

Who is the natural choice for domestic limestone in blocks, slabs, and tile, wall cladding and architectural features?

American Limestone Co.

Call (214) 720-7150 for further information regarding products and pricing.

Circle 9 on the reader inquiry card

AMERICAN LIMESTONE COMPANY

Rock Solid

Texas Quarries Cordova Cream and Cordova Shell Limestones blend rock solid strength and hand-tooled craftsmanship from experienced artisans. They give architects an intriguing and ageless decorative material for interior and exterior applications.



Only nature provides Cordova Cream's flowing, dense patterning and Cordova Shell's intricate, changing texture of fossilized shells and shell fragments. Specify it for its proven performance against extreme temperature changes and resistance to the elements.

Available in Lueders gray, too, Texas Quarries Limestone is a rock solid alternative for unlimited design possibilities with a material that stands up to time and fashion.

Circle 6 on the reader inquiry card



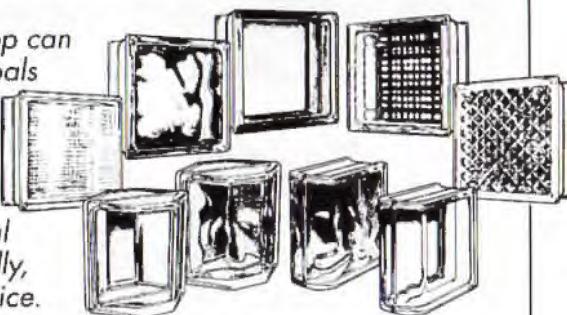
Featherlite Building Products Corp.
P.O. Box 1029
Austin, TX 78767
512/472-2424

PITTSBURGH CORNING PCGLASSBLOCK[®] PRODUCTS



Wholesale and Contractor Sales of PC GlassBlock and Accessories

The Glass Block Shop can meet your design goals with Pittsburgh Corning's versatile, exciting range of glass block styles, patterns, and special shapes. Enjoy friendly, knowledgeable service.



The Glass Block Shop Master Distributor

**(214) 243-7343 (800) 777-2107
Fax (214) 243-3666**

Dallas • San Antonio • El Paso • Oklahoma City

Circle 104 on the reader inquiry card

Follow Your Instincts.

When you were little, what kinds of materials did you choose to build with? You probably started off with toy brick and rocks—masonry...well, sort of. Later, you moved on to the real stuff.

Have you ever asked yourself "why?" Why masonry? Perhaps it was instinctive. Because masonry is resilient. Sturdy. Tough. You just knew, right from the beginning, that you could create anything with masonry. Any shape. Any size. A fort. Tall buildings. The most elaborate castles.

Guess what. You still can! Masonry's natural beauty, its building qualities, its natural insulating properties make it the perfect choice for your next building project. It's your chance to be a kid, all over again.

Build it with masonry and it will be beautiful, functional, and lasting.

And you will be proud...



and want to build another one.



Masonry Institute of Texas
P. O. Box 34583
Houston, Texas 77234

Circle 3 on the reader inquiry card

Masonry & Glass Systems

Masonry & Glass Systems, Inc., is the master distributor for Pittsburgh Corning GlassBlock for the states of Texas and Oklahoma. Order and delivery services are provided from three warehouses—in Houston, San Antonio, and Laredo. This allows dealers statewide to secure products for same- or next-day delivery. As the distributor for PC GlassBlock, Masonry & Glass Systems, with Pittsburgh Corning, offers a five-year warranty on its products. This five-year warranty is the only one offered by any glass block manufacturer.

Masonry & Glass Systems personnel have the technical expertise to assist you in any project that you may be considering. Last but not least, we are proud to be the Master Distributor of Pittsburgh Corning products, the only American-made glass block.

Circle 10 on the reader inquiry card



DIAMOND™ The Pinless System™

Segmental concrete retaining wall system

- Flexible design
- Easy installation
- Rugged durability

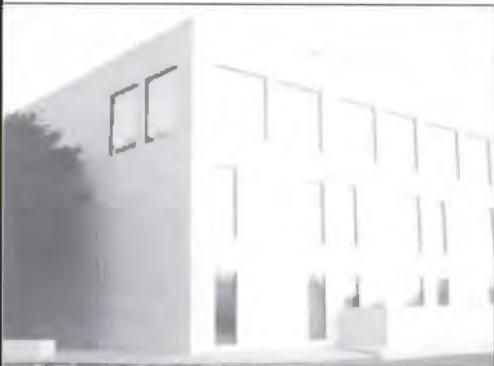


PAVESTONE CO.
MODULAR CONCRETE BEAUTY™

1-800-245-PAVE or 1-800-580-PAVE (Texas Only)

TM - Trademark of Block Systems, Inc. U.S. Patent # 5,062,610

SplitFace Block • Fluted Block • Slump Block • Glass Block • Concrete Brick • Concrete Pavers



Plaza Ten Building - McAllen, Texas
Tom Ashley III Architect



Valley Medical Arts Clinic - McAllen, Texas
Rike & Ogden Architects



Ressurection Catholic Church - Alamo, Texas
Labunski & Assoc. Architects

Beauty • Strength • Durability
CUSTOM ARCHITECTURAL MASONRY

Valley
BUILDERS SUPPLY ^{inc}
BLOCK
& BRICK

THE LARGEST MASONRY SUPPLIER IN SOUTH TEXAS

P.O. Drawer Z • PHARR, TEXAS 78577 • 512 787-3223

Concreation

Reconstructed Stone is a blend of fresh Portland cement, fade-resistant pigments, and, typically, granite or marble sands (although we can utilize any sands you wish). It is packaged 60 pounds per 5-gallon bucket and its application rate is 150 pounds per 100 square feet. It is applied by the dry-shake method to the surface of fresh concrete and given a hard-steel trowel finish. After it is cured for a minimum of 30 hours, you then sandblast or acid etch the surface to depress the matrix and reveal the aggregates.

If you have paid any attention to the surface of concrete flatwork, you will have noticed that, over time, the surface wears down to reveal the sand fines in the concrete. With Reconstructed Stone, instead of settling for a gray matrix and normal concrete sands, you can have any color matrix and any single or combination of aggregates you wish. Send us material

Circle 41 on the reader inquiry card



Reconstructed Stone pool deck with a very pale pink matrix and Burnet pink granite sands

such as brick or stone being used in your project and Concreation will provide a custom sample of Reconstructed Stone.

1550 East Renfro Road
Burleson, Texas 76028
800/292-2012

Masonry & Concrete
Special Advertising Section

Another QUALITY JOB

from

AMERICAN MARBLE MOSAIC CO.
6314 St. Augustine St.
HOUSTON, TEXAS 77021
(713) 747-7634 FAX (713) 747-2526



A Member of the Association

Circle 137 on the reader inquiry card



National Terrazzo Tile & Marble, Inc.
1000 Houston • Houston, Texas 77020 • 713/787-0400 • Fax: 713/787-0400 • 800/399-5881

Circle 137 on the reader inquiry card

Secure, Inc.

Jeff Casey has joined Secure, Inc., as vice president of sales and marketing. Jeff is a graduate of Oklahoma State University with degrees in Construction Technology and Business Administration. He has an excellent background in masonry water proofing,



cleaning, and restoration, and correction of masonry water-intrusion problems in both flat and vertical construction.

Secure is a manufacturer of masonry sealers, water repellents, masonry coatings, stains, and hardeners, and has supplied these materials to the masonry construction industry for the past 20 years.

Circle 34 on the reader inquiry card

Tech Support and Assistance for Detailing Masonry and Ceramic Products

Specialists in masonry, clay brick paving, ceramic materials and ADA detectable warning services. Representing major manufacturers, serving architects and vendors in the southwest.

Allied Marketing Services
Buddy Beck
800-541-2325

Circle 112 on the reader inquiry card

If The Production Of Your Construction Documents Is A Bigger Design Task Than The Project Itself, You Need MASTERKEY/ConDoc® For CAD Software.

The ConDoc system organizes, simplifies, coordinates, and produces uniform construction documents so you can create them in less time and with more quality control.

With ConDoc For CAD software from AIA Master Systems you get all of the benefits of the ConDoc methodology integrated with your CAD system plus:

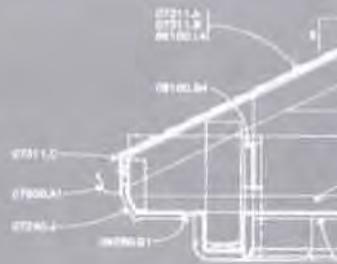
- Automatic generation of ConDoc formats and sheet set-up;
- Automated drawing notations with a one-to-one match between legend text and drawing symbols;
- Direct linkage of drawings with specifications through keynoting;
- Crisp, clear, and easy-to-read drawings produced in less time than by traditional methods.

AIA Master Systems



THE AMERICAN INSTITUTE
OF ARCHITECTS

Get the facts about ConDoc For CAD. You'll see why MASTERKEY/ConDoc® for CAD software, developed by practicing architects, is becoming the standard system for producing coordinated construction documents.



Circle 108 on the reader inquiry card

Call Toll-Free 1-800-424-5080, Ext. 7576

I want to produce better construction documents in less time.

Send me free information about MASTERKEY/ConDoc® for CAD software, the new cost-effective system for preparing construction documents.

NAME _____ TITLE _____

ORGANIZATION _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE _____ BEST TIME TO CALL _____ AM/PM

Did you attend a ConDoc Seminar? Yes No

What CAD System do you have? AutoCAD MicroStation

Other _____ None

Mail to: MASTERKEY/ConDoc Marketing
Master Systems

The American Institute of Architects

1735 New York Avenue, N.W.

Washington, D.C. 20006

Toll-Free 1-800-424-5080, Ext. 7576

Fax (202) 626-7466

© 1992, AIA



Spectra-Glaze® II

FACTORY-GLAZED CONCRETE MASONRY UNITS

In Texas and the Southwest:

- Design opportunities – unlimited colors, wide selection of scale and pattern (even 12" x 12" and 16" x 16" face sizes), interesting textures.
- Decades of proven performance, interior and exterior.
- Ease and economy of modular concrete masonry design and construction
- Operational and life-cycle cost savings.
- Supply from large, efficient plants.

CALL FOR SERVICE: in Dallas: Metro Glazed Block Sales—
(214) 641-4068 • in Houston: Goyen Specialties—(713) 622-2371
• in San Antonio: J.W. Specialties—(210) 654-8441 • Elsewhere
in Texas and the U.S.A.: (800) 638-3188.

United Glazed Products, Division of The Burns & Russell Company

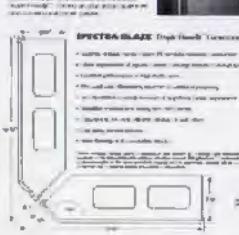
© 1991, all rights reserved; ® registered U.S. Patent Office, Canada & other countries by The Burns & Russell Company

Circle 81 on the reader inquiry card



UNITED GLAZED PRODUCTS
announces

People Friendly™
Corners
More SPECTRA-GLAZE® Units



People Friendly™ Corners A Superior New Product

Now available, a unique proprietary corner system for modular masonry construction. People Friendly™ corners offer:

- Dramatic cost savings
- ADA compatibility
- Strong, simplified construction
- Damage-resistant corners

Call for information.

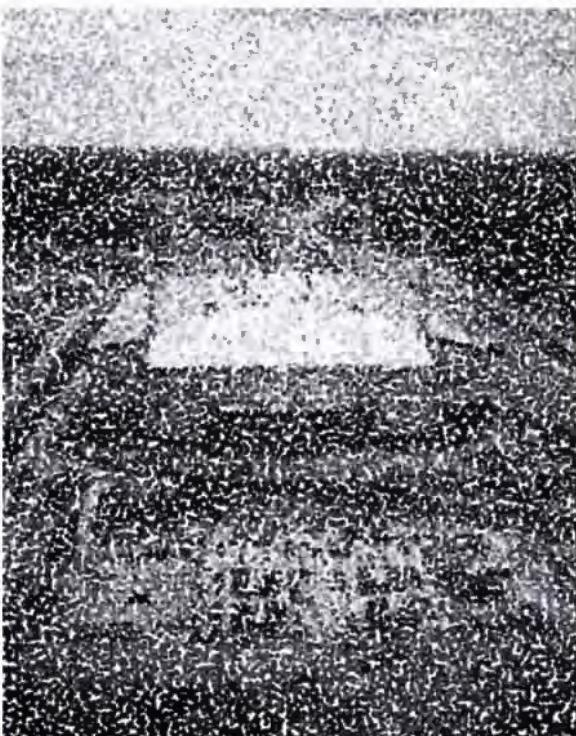
United Glazed Products

800/638-3188

Patent pending. Design, physical appearance and pattern are copyright and trademark property of The Burns & Russell Company. All rights reserved.

Circle 81 on the reader inquiry card

Public Buildings



IN THIS ISSUE we present a selection of new projects for public clients in Texas, including the Texas Capitol Extension in Austin (top right), the Federal Reserve Bank headquarters in Dallas (top left), the San Antonio Alamodome (left), the Western Currency Facility for the federal Bureau of Engraving and Printing near Fort Worth (above), the Irving Criminal Justice Center in Irving, and the Southeast Dallas Police Station. With a wide range of physical and social contexts and a variety of budgets and programming priorities, these projects provide a sampling of new publicly funded architecture in Texas.

Joel Warren Barna

Buried Treasure

by Joel Warren Barna

THE QUIET, SKYLIT underground building called the Capitol Extension is the first phase completed of the three-phase restoration and expansion of the 104-year-old Texas State Capitol in Austin; the project began in 1988, following a decision by state officials to spend \$149 million to deal with chronic overcrowding and the threat of a disastrous fire in the historic building. Changed plans and higher bids later resulted in a total budget of \$180 million. Restoration of the Capitol's exterior is nearly complete, and work on the interior is scheduled for completion in 1994.

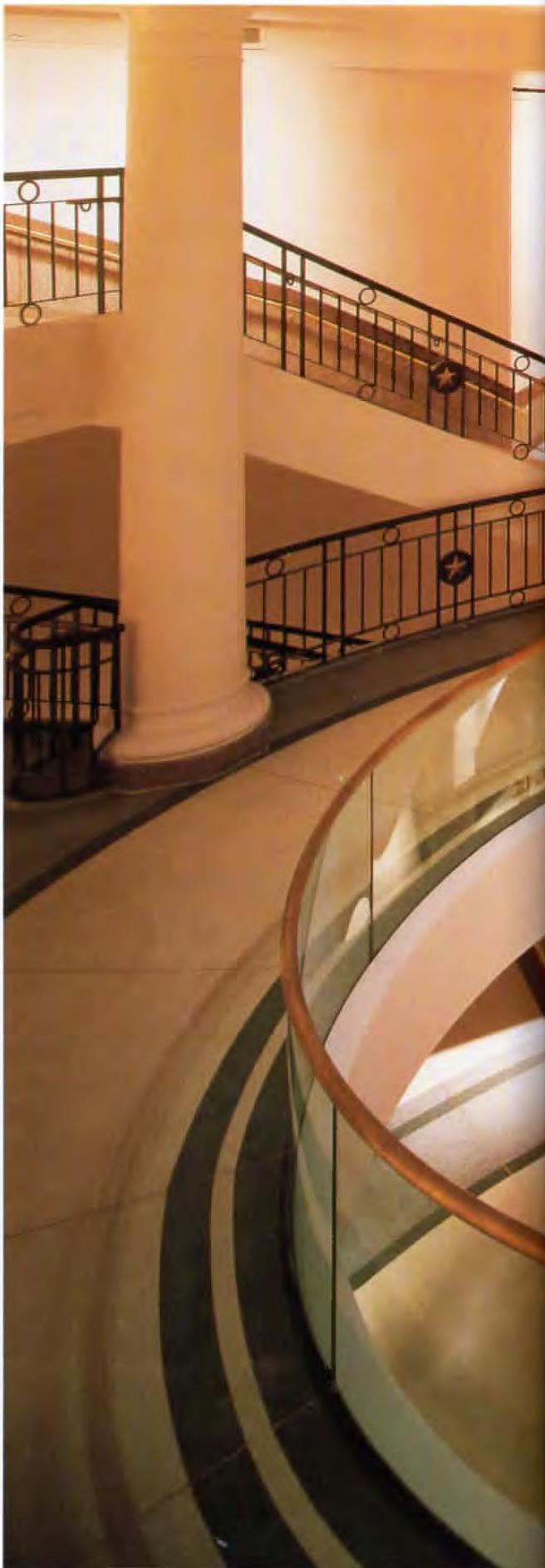
Architects for the overall project are a joint venture of 3D/I of Houston and Ford, Powell & Carson, Inc., of San Antonio; 3D/I is lead architect for the extension itself. The decision was made early on to build below ground. A massive hole was dug on the Capitol's north side, and construction was begun on the \$63.6-million extension, which measures 615,000 square feet in two office levels and two levels of parking for up to 681 cars. The office levels contain space for 12 state senators, 99 state representatives, the Legislative Budget Board, 16 committee rooms, 49 committee-staff suites, an

Right: The first of two rotundas that spatially unite the Capitol Extension showcases the obverse of the state's seal in terrazzo.

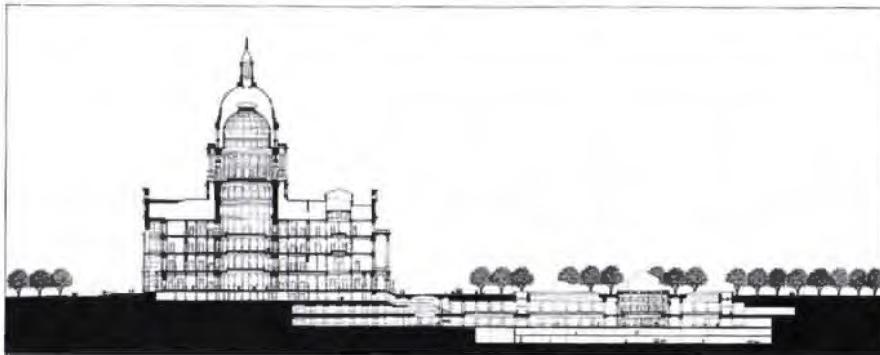
Below: Senate Finance hearing room



Photographs by Joe Alter Photography





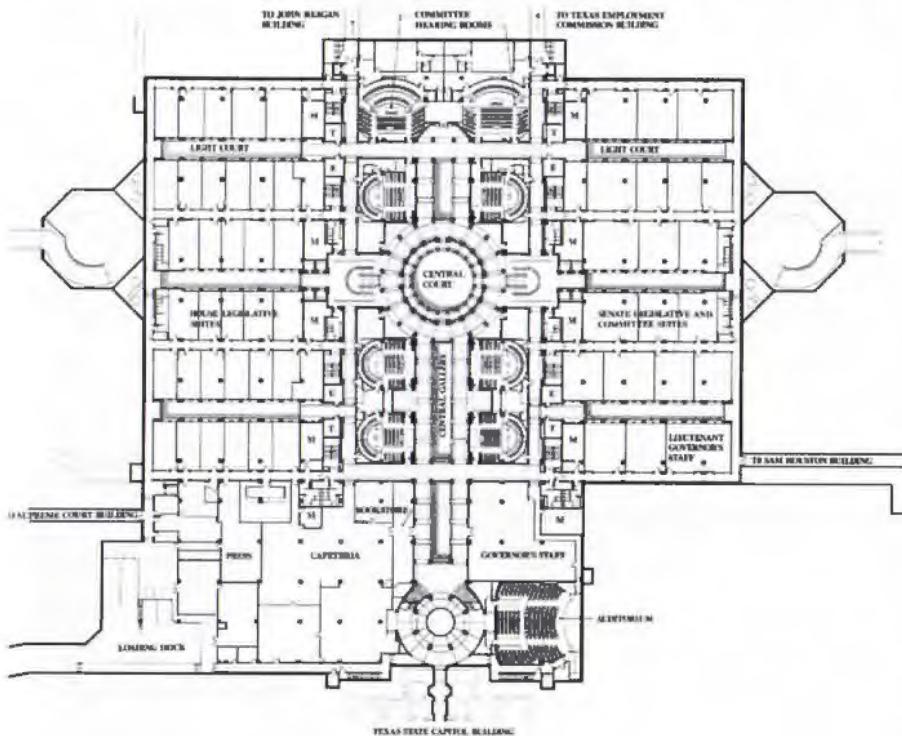


Left: north-south section, with the Extension's two office levels and two parking levels

end are large hearing rooms of the House Appropriations and Senate Finance Committees.

Center left: Plan of level one; at the north

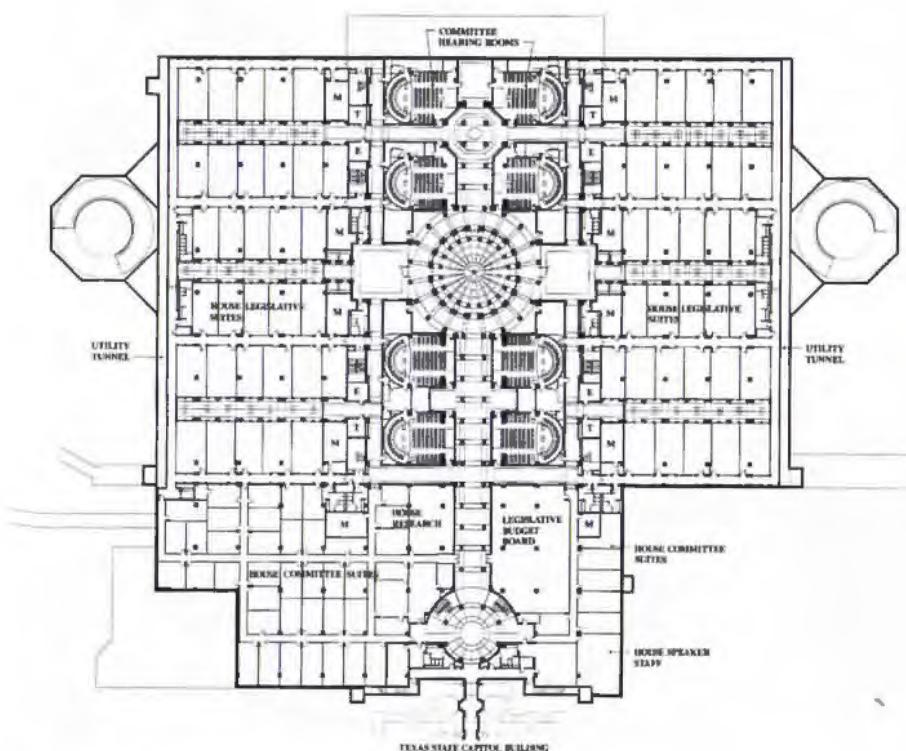
Bottom left: plan of underground level two



auditorium, a cafeteria, a press area, bookstore, and, for the time being, the offices and staffs of the Governor, Lt. Governor, and Speaker of the House.

According to Kirby Keahey, FAIA, project director, the aim was to provide contemporary services for the Legislature in a setting compatible with the historic Capitol to which it is connected. Spatial relationships to the Capitol were maintained; it is the same distance from the Extension to the legislative chambers in the Capitol as it is from one end of the Capitol to the other. In addition, tunnels connect the Extension to four other nearby state office buildings. Hearing rooms and support spaces in the Extension are bigger than equivalent spaces had been in the subdivided Capitol, air conditioning and plumbing are better, and everyone will—at least in theory—have more spacious offices, Keahey says. At the same time, the architects were working under a strict budget, and had to adjust materials and construction to keep costs in line.

The central spaces of the extension, a long north-south gallery under skylights that provide glimpses of the Capitol dome, along with other



Facing page, bottom right: East-west corridors used frequently by the public are detailed in granite and wood, like those in the Capitol.

Below left: An open-air rotunda, faced in granite, provides a major orientation point for the central corridor, as well eye-level contact with the outside.

Bottom left: Skylights bring light to east-west corridors opening to the offices of state legislators, their staffs, and other state officials.

Below: A skylit spine runs north-south, helping orient visitors to the underground space by providing an impressive view of the Texas Capitol.



public corridors, are detailed in granite or oak, with colorful terrazzo floors—materials that echo those in the Capitol. The central corridor is lined with simplified versions of columns found in the Capitol, recreated by using thin but visually convincing covers for the Extension's concrete structural piers. The south end of this main corridor is marked by a rotunda that centers on a terrazzo floor seal, the obverse of the official state seal under the Capitol dome. The north end is punctuated by a 40-foot-high open-air rotunda that lights the colonnade around it. East-west corridors leading to legislative and staff offices are detailed with molding over gypsum board, a cost-cutting measure; each of these offices opens onto a sunlight-filled, glass-covered court.

Says Bill Cryer, the Governor's press secretary, who recently moved into the Extension, "It's amazing how much light there is down here."

Already, spaces are filling in past their planned capacity, and some offices have been plugged into windowless spaces. At least now the legislators and their staffs have more space to work with. **TA**

PROJECT Texas Capitol Extension and Preservation, Austin

CLIENT State Preservation Board, Dealey Henderson, executive director

ARCHITECTS 3D/International, Inc., Houston; Ford, Powell & Carson, Inc., San Antonio, in joint venture (Project team for extension: Kirby M. Keaby, FAIA, project director; G. Norman Hoover, FAIA, extension design principal; C. K. Pang, project designer; Ray McClure, project architect; Lance Hu, Rick Fals, Marissa Yu, Brad Glaesmann, Ed Tufts, Ginny Mullins)

CONTRACTOR Spaw-Glass, Houston, excavation contractor; Charter Builders, Inc., Dallas, building contractor

CONSULTANTS The Datum/Moore Partnership, Dallas and Houston (structural); Walter P. Moore & Associates, Houston (traffic); 3D/I Engineering, Houston (mechanical, electrical, and plumbing engineering and estimating); S. A. Garza Engineers, Inc., Austin (civil); E. L. Fly & Associates, San Antonio (landscape architects); The Architects Office Corporation, Austin (excavation coordination); George Sexton Associates, Washington, D.C. (lighting); Mulhauser/McCleary Associates, Inc., Houston (food service); Comsul Ltd., Houston (telecommunications); Rolf Jensen & Associates, Inc., Houston (life safety); Joiner & Company, Arlington (acoustics); Fuller Dyal & Stampfer, Inc., Austin (graphics)



The Power and The Glory

by Willis Winters



**The new federal
reserve takes its place
among the landmarks
of Pearl Street: Texas
Commerce Tower, The
Meyerson Center, and
the Crescent.**

THE NEW BUILDING for the Federal Reserve Bank of Dallas marks the emergence into public view of an important institution that had been virtually hidden in its previous downtown location. Whether public understanding of the Federal Reserve's mysterious actions will change is an open question, but the physical contrast between the bank's old and new quarters could not be more startling. After vacating its former home of 71 years—a dark, neoclassical edifice designed by Graham, Anderson, White and Probst of Chicago—the new Fed now enjoys unsurpassed public visibility due to its pivotal site on Woodall Rogers Freeway, north of downtown.

The site, eight acres on Pearl Street, occupies a sort of middle-ground between the downtown high-rise landscape, across the freeway two blocks to the south, and Philip Johnson's Crescent office building, a block north. Equally important contextually are the site's adjacencies to the Dallas Arts District (I.M. Pei's Morton H. Meyerson Symphony Center is directly across the freeway) and the historic State-Thomas neighborhood, with its emerging residential development along McKinney Avenue. Pearl Street—all four blocks of it—stretching from the Crescent past the Fed, the Mort (as the symphony center is called), and Santuario Guadalupe, to Texas Commerce Bank Tower and beyond, now has enough landmarks in place to become one of Dallas' great public boulevards. With each end of Pearl firmly anchored by significant tall monuments, the Federal Reserve Bank provides the final critical plug into what was formerly a desolate strip of surface parking, vacant property, and machine shops, along with the charred foundations of Trinity Methodist Church.



Richard Payne, FAIA



Richard Payne, FAIA

Facing page: facing downtown Dallas across the Woodall Rogers Freeway, the Federal Reserve in effect extends downtown northward.

Above: The double-height stone and glass lobby, with its stunning views of downtown, is the only part of the building open to the public.

Left: The boardroom is detailed in a style inspired by the early-20th-century Craftsman movement.

At 764,000 square feet, the Federal Reserve Bank is a behemoth, befitting a giant federal corporation with peculiar and disparate functional requirements. The program generated a ground-floor area of 250,000 square feet to accommodate extensive check-handling and delivery services, in addition to the vaults and related money-handling facilities. This six-acre footprint occupies three-fourths of the site (the remaining two acres are for future expansion) and creates a "piano nobile" level organized around the smaller of two rooftop gardens. This courtyard is enclosed on three and a half sides by a floor of employee amenities—cafeteria and lounge, auditorium, training facility and conference center, and fitness and daycare centers, in addition to a linear gallery; the opening on its southwest corner provides stunning framed views of downtown. As the building continues to rise above level two to accommodate more standard office functions, it steps back and reconfigures in two-floor increments, first forming a "C" open to the south, then an "L" and finally culminating with the upper eight floors of the office tower on the

Facing page, top:
The elevated central
courtyard presents
other controlled views
of downtown.

Facing page, below:
plans

Right: The Federal Reserve Bank presents a tall limestone wall to the low-scale State-Thomas neighborhood.

Below right: The elevations facing the courtyard are arranged in picturesque compositions of massing and materials.



BlackmonWinters Photography



BlackmonWinters Photography

west. This basic configuration of a large ground floor (and roof-top garden) with gradually diminishing mid-rise floors and an office tower is not new within the Federal Reserve System. In the last fifteen years, two other significant bank facilities—those in Boston (Hugh Stubbins, 1977) and San Francisco (SOM, 1983)—have followed this model, with varying degrees of success.

Beyond meeting the client's stringent functional requirements, the building also succeeds in fulfilling the Federal Reserve System's prime directive governing the design of new buildings—to portray "stability, dignity and security."

Working within these guidelines, the design team (Sikes, Jennings, Kelly & Brewer, Houston; Kohn Pedersen Fox Associates, New York; and associate architect John S. Chase, FAIA, Dallas and Houston) has achieved a scenographic, sometimes whimsical, composition through the use of scale manipulation and shifted geometry, in addition to an articulate, if slightly contrived, architectural vocabulary. Contextual clues are abundant. The office tower is shifted off the axis of the lower floors to acknowledge both the directional views towards downtown and the importance of the freeway intersection. A giant curving slab of masonry defines the eastern half of the tower, echoing the curve of the Meyerson's lobby. Bank and symphony center also share exterior cladding (limestone from the same quarry in Indiana, with the same rectangular cut) accented by a gray granite base; an off-white aluminum curtain wall system; and in the interior public spaces, raw, highly polished concrete structure and travertine flooring. Since designer Bill Pedersen worked for Pei on the East Building of the National Gallery of Art, it's no surprise, also, to find the projecting corner of the tower's curving masonry precisely detailed to a razor-sharp edge.

Rising above an imposing stone base is a city in miniature, rendered with simple volumetric shapes, each differing in material and fenestration. When viewed from the Woodall Rogers canyon, this picturesque composition assumes the character of a fortified castle, complete with drawbridge (the Pearl Street overpass), an allusion not inappropriate to either the building type or this site. The palette of limestone cladding and crisply-detailed curtainwall with reflective glass provides dramatic visual contrasts throughout the complex. Whereas the two materials are used to define and isolate different masses of the sprawling base, they are deftly blended together on the office tower to produce a singular soaring image that has become the bank's most striking characteristic. Vertical emphasis on the tower and the mid-rise office blocks is achieved

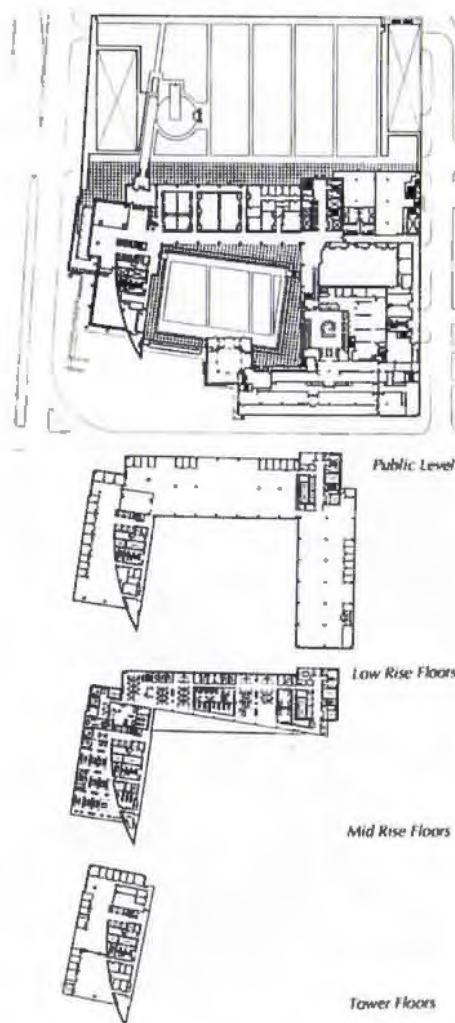
through narrowly spaced limestone and aluminum fins with contrasting aluminum mullions on the curtainwall. There is a bonus with this fenestration system: when viewed from an oblique angle, the projecting fins make the building appear solid and secure; when viewed straight-on, the fins tend to disappear, and the building seems to be predominantly glass, and therefore more hospitable.

This is not to say that the Fed is overly friendly for anyone but its employees, however. It is an object better viewed from a distance than from the adjacent sidewalk. Only at the base of the office tower does one find glass and any elements with reduced scale; an imposing limestone wall (needed for security) wraps the remainder of the complex at the ground level. This wall, while contributing to the scenic composition facing downtown, turns a blank face to the State-Thomas neighborhood.

For a public building, the Federal Reserve Bank offers up very little of its floor space for civic encounters. Only those wishing to purchase T-bills or trade securities have any reason to enter the beautifully-detailed stone and glass lobby, with its pan-



Richard Payne, FAIA



oramas of downtown. More fortunate are the 1,200 Fed employees, who enjoy one of the better corporate work environments in the city, including the two impressive roof-top gardens designed by the SWA Group. Employees actually come to work each morning through the expansive north garden, ascending from the underground parking garage via elevator to a circular roof-top pavilion, then moving through an open-air passageway into the second level of the office tower. The interiors, by Kohn Pedersen Fox & Conway with Sikes, Jennings, Kelly & Brewer, are elegant. Memorable spaces, in addition to those on the second floor, include somewhat whimsical, craftsman-inspired executive offices and board room, in addition to a cash vault of epic dimensions.

The Federal Reserve Bank is public only in its role as a government institution. By nature and in fact, it is as inward-oriented and security-conscious as any private corporation with both physical and electronic assets to protect. The new building does embrace a certain public-spiritedness, however, by virtue of its prominent, unconstricted location and the expansive and highly picturesque design solution provided by its architects. It also addresses the public realm through its ultimate ability to communicate the sheer power of its client, in a way that few buildings ever accomplish. **TA**

Architect Willis Winters of Dallas is a principal of BlackmonWinters Photography, Irving.

PROJECT Federal Reserve Bank of Dallas

ARCHITECTS Kohn Pedersen Fox Associates, New York; and Sikes, Jennings, Kelly & Brewer, Houston; (Project team: Benjamin E. Brewer, Jr., FAIA, principal in charge; William Pedersen, FAIA, design principal; Robert Knykendabl, project manager; Roksan Okan-Vick, project architect; Richard Clarke, project designer); Associate architect: John S. Chase, FAIA, Dallas and Houston

INTERIOR ARCHITECTS

Kohn Pedersen Fox & Conway and Sikes, Jennings, Kelly & Brewer (Miguel Valcarcel, principal-in-charge; Robert Hartwig, project manager)

CONTRACTOR Austin Commercial, Dallas

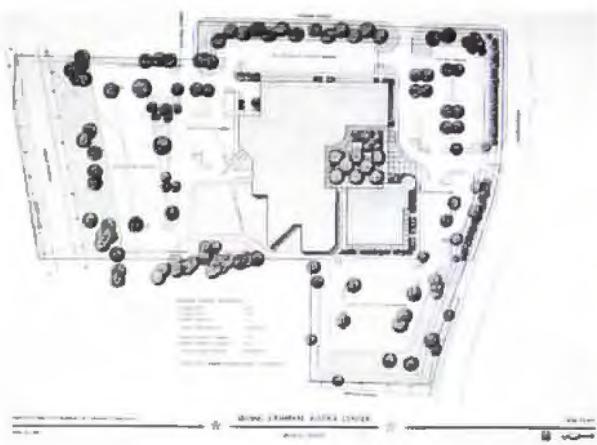
CONSULTANTS SWA Group, Houston (landscape architects); Datum-Moore Consulting Engineers, Houston and Dallas (structural); Blum Consulting Engineers, Dallas (mechanical, electrical, and plumbing); Carter and Burgess, Fort Worth (civil); Douglas Harding, Houston (graphics); Knight O'Connor, Houston (security); Rolf Jensen, Houston (life safety)



Photographs by Beckmann/Winters Photography

An early site plan (right) shows how a public plaza (above and far right) is enclosed by buildings in the Irving Criminal Justice Center.

Facing page: The lobby of the municipal courts building is marked by a curved wall of shaded windows.



Law and Order

by Joel Warren Barna

RAPID POPULATION GROWTH has meant increasing stress on the police and courts services provided by the City of Irving, the town just east of Dallas best known as home of Las Colinas and Texas Stadium. The new Irving Criminal Justice Center, designed by the Dallas office of Hellmuth, Obata & Kassabaum, was built to meet that need. The complex, combining jail, police station, and municipal courts, was built on a 9.7-acre site near the historic center of Irving, a district of one- and two-story turn-of-the-century commercial structures and houses. The justice center links this district with a city hall-public library building that was constructed in the 1980s.

The new justice center uses brick, cast stone, and metal grillework to interpret the elements of generalized small-town Texas architecture, combining them with modern functional requirements.

The architects achieved an urbanistic stroke by folding their complex around a courtyard that opens off Irving's uninflected street grid, creating a first-ever civic square.

City officials had emphasized that the police and judicial functions were to mesh, but that the jail and the courts should have separate entries. "They said they wanted people to have the feeling that they would get a fair shake, not that the courts and police were in cahoots," says Kirk Millican of HOK, project designer for the complex. HOK responded by creating curving circulation bays, facing each other across the plaza, for the entries.







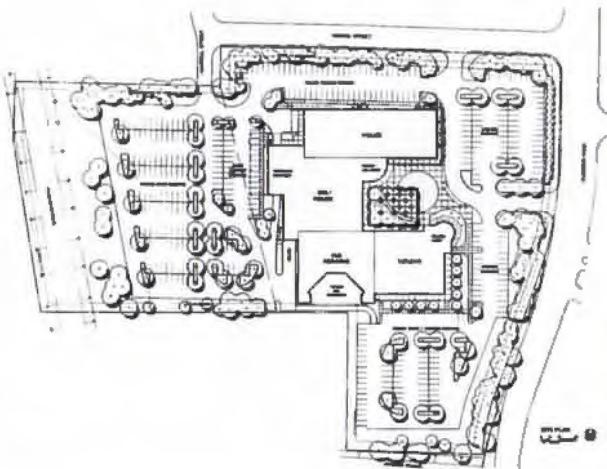
PROJECT Irving Criminal Justice Center, Irving

CLIENT City of Irving
(Douglas Bales, Assistant City Manager)

ARCHITECT Hellmuth, Obata & Kassabaum (Project team, architecture: Dan Jenkins, principal-in-charge; Bill Lacey, design principal; Kirk Millican, project designer; John Kraskiewicz, project manager; and Bobby Carter, project coordinator; Project team, interiors: Molly McIntyre, Loretta Fulvio, and Terri Hogan; Landscape design: Mike Preston and Mark Bowers; Graphics: Michael Gilbreath; Lighting: Roberta Swatek)

CONTRACTOR Spaw-Glass, Inc., Houston

CONSULTANTS Datum-Moore, Inc., Houston and Dallas (structural and civil); Carl Erickson, Dallas (security)



Top: triangular interior of a dayroom in the Irving Criminal Justice Center's municipal jail

Above left: plan, showing interlocking footprint of the police station, the temporary and long-term jail buildings, and the municipal court



Above: A central monitoring station, with electronic equipment, allows surveillance of jail cells and dayrooms from a single point.

Facing page, top: Interior of a municipal courtroom; wood paneling and lighting separate the jury box and bench from the rest of the room.



The central entry bows out from the juncture of the police station and jail; it is fronted by a double-height gridded wall of glass. Behind it on the first floor is the department's community-services division and jail-visitation area. Upstairs are the offices for detectives. Most of the police officers and all of the prisoners enter the building from the secured vehicular sallyport at the rear of the building, which leads to the intake center and temporary cells. Longer-term prisoners are housed in the jail, which is composed of four two-story pods of cells arranged around triangular dayrooms; personnel costs were a major concern, so a single guard in the central control station can keep the entire jail under surveillance.

The courts entry, behind a wall of glass block, features an imposing stairway framed by radiating columns. The first-floor lobby is devoted to teller windows for paying fines. The courtroom level, upstairs, is linked by elevator to the jail and by corridor to the police station. Efficient inner circulation and civic presence make the new justice center a welcome addition to Irving's townscape. **TA**



Above: a conference room in the Irving Police Station

Dome Alone

by Susan Williamson

Right: north elevation, with transit station under construction in foreground

Below right: north-south section

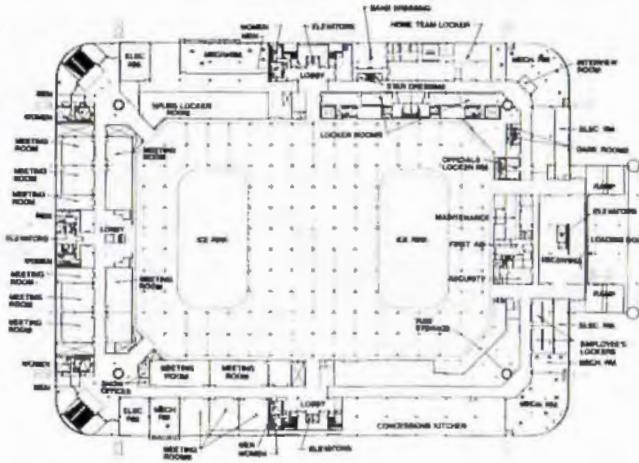
PROJECT Alamodome (multipurpose stadium), San Antonio

CLIENT VIA Metropolitan Transit Authority and City of San Antonio

DESIGN TEAM Marmon Mok, San Antonio (design prime: architecture; interior design; mechanical, electrical, and plumbing); HOK Sports Facilities Group, Kansas City, Mo. (architecture); and W.E. Simpson Company, Inc., San Antonio (civil and structural)

PROJECT MANAGER Day & Zimmerman, Inc., San Antonio

CONSULTANTS Aranda, Inc. (surveying); E.L. Fly & Associates (landscape planning); GGC Engineers (site utilities); Grant Engineering (drainage); Haywood Jordan McCowan (architect for City Water Board Central Plant Building); M-E Engineers, Inc. (mechanical); Martin-Martin (structural); McChesney Design (graphics); George W. Muery Services, Inc. (surveying); Curtis Neal & Associates (ductwork and general lighting); Andrew Perez Associates (site development); Dean H. Phillips (programming); Raba-Kistner Consultants, Inc. (soils testing); James T. Rodriguez Consulting Engineers, Inc. (fire detection, alarm stations, plumbing); Wilbur Smith Associates (traffic); Somerville-Gonzalez & Associates (civil); Structural Engineering Associates, Inc. (site structural); Wrightson, Johnson, Haddou & Williams, Inc. (acoustics)



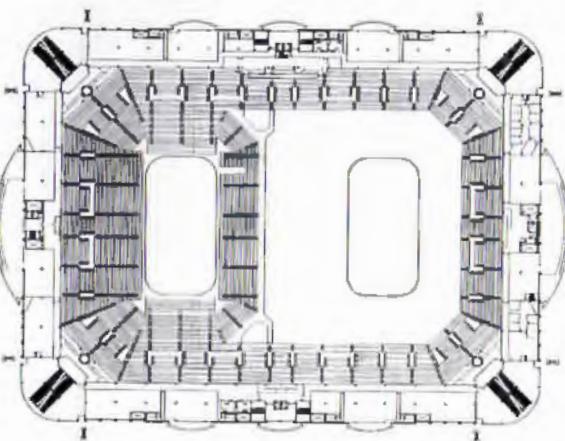
THE TOWER OF THE AMERICAS has some competition on the San Antonio skyline these days: the four towers of the Alamodome, which rise 300 feet into the sky across the interstate from downtown.

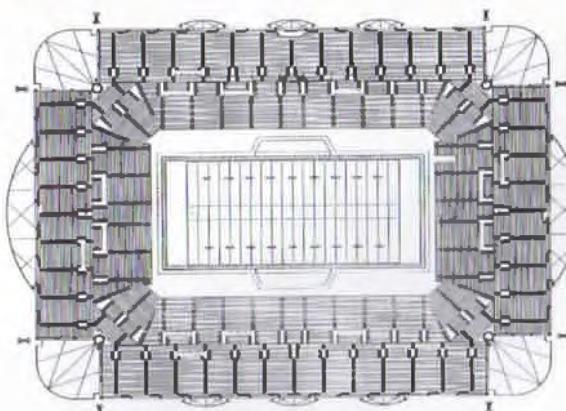
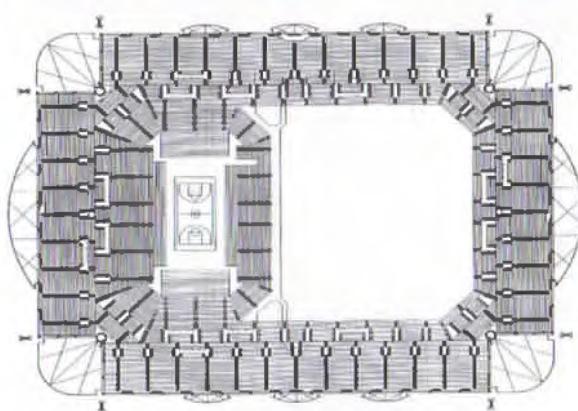
The towers are the central feature of the Alamodome's innovative suspended roof structure, which leaves the interior column-free. High-strength cables connect the towers to points on the roof and are then anchored to concrete piers sunk 90 feet into the ground.

The stadium was built to meet NFL requirements, and, although hopes for an NFL expansion team were dashed last year, a Canadian Football League team will shortly take up residence. Other sports, from basketball (the Spurs move in next season) to ice skating, can also be accommodated, as well as concerts, conferences, and other similar events.

The exterior combines walls of horizontally banded, multicolored masonry with exposed steel trusses set under the eaves of the standing-seam metal roof; blue glass curtainwalls open the entryways on the north and south, the four corner circulation areas, and three bays on the east and west elevations to views of the surrounding city.

The architects compensated for the stadium's isolation on the freeway's east side by developing pedestrian links to the westside Convention Center and Hemisfair Plaza. A VIA transit station on the north end of the site provides a connection to the historic St. Paul Square area. City officials hope these linkages spur economic development around the stadium. **TA**



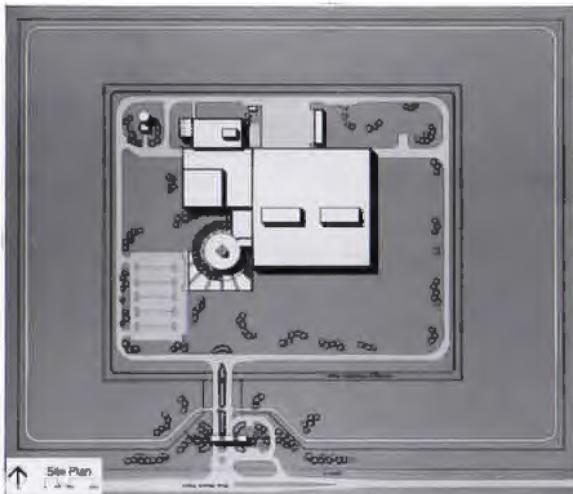


Above: The Alamodome's towers and materials address the downtown context.

Bottom, left to right: configuration plans—exhibitions (field level); hockey seating (lower level); basketball seating (upper level); and football seating (upper level)

Below: Architects Kirk Voich Gist of Fort Worth brought drama to the entry of the Western Currency Facility, setting it under a pyramidal skylight that centers on the Bureau of Engraving's seal.

Right: site plan



Money Factory

by Susan Williamson

THE WESTERN CURRENCY FACILITY is essentially a \$66-million manufacturing plant, but the program that faced Kirk Voich Gist, Inc., of Fort Worth, was complicated enough for a fortress, with good reason. The Western Currency Facility's product is money, U.S. currency to be exact, and the project required resolution of a complex set of industrial-design and planning issues.

Some of those issues included the need for a high degree of physical security, for treatment of hazardous waste and air emissions, and for creation of a pleasant working environment. The program required areas where currency is printed, examined, packaged, and shipped, as well as a 19,000-square-foot Federal Reserve vault. In addition, complete employee support facilities and a large administrative complex were required.

Kirk Voich Gist responded to this list of requirements by organizing the facility around the production process, while at the same time drawing clear distinctions between various functional areas. The administration and entry complex looks like a separate volume from the manufacturing plant; it is further distinguished by its facing of white concrete and its round, pyramid-topped form. The production building, a simple rectangle of rusticated, sandblasted gray concrete, is set back on the site.

The two-story administrative and entry area is the focal point of the facility. Set in a large granite-paved plaza, the circular building is topped by a black glass pyramidal skylight; the floor under the skylight is inlaid with a seal of the Bureau of Engraving and Printing. Offices on two levels surround the open lobby area, while other employee-support areas are housed in a building to the rear of the lobby.

Working conditions in the production portion of the facility were not neglected; high-efficiency lighting, acoustical treatment, and the use of bright color and graphics were included in the design. **TA**

PROJECT Western Currency Facility, Fort Worth
CLIENT U.S. Department of the Treasury, Bureau of Engraving & Printing

ARCHITECT Kirk Voich Gist, Inc., Fort Worth

CONTRACTOR Thomas S. Byrne Construction, Inc., Fort Worth; Walker Construction Co.; Hensel Phelps Construction Co.

CONSULTANTS Carter & Burgess, Inc., Fort Worth (mechanical, electrical, and plumbing); Entertech, Inc. (environmental and waste treatment); EG&G Security Design (security)



Left: The entry opens onto a broad plaza.

Below: Kirk Voich Gist adhered to a straightforward arrangement of functions, with the manufacturing space set back on the site and all the office functions clustered around the entry.



Photographs by James F. Wilson

Station House

by Johanna Rowe

THE \$2.5-MILLION Southeast Dallas Police Facility, designed by Brinkley Sargent Architects of Dallas, was completed in 1990. Approximately 200 patrolmen, criminal investigators, and administrators are located in the facility, which includes all police functions except prisoner processing and holding. The building is centered around a circular station officers' area, which is directly connected to public, staff, and watch entries, and which acts as a hinge joining all the departments. An automobile-servicing area which provides fueling and car repair is also a part of the police facility. The 12-acre site was master planned to include future expansion space for other city departments. **TA**

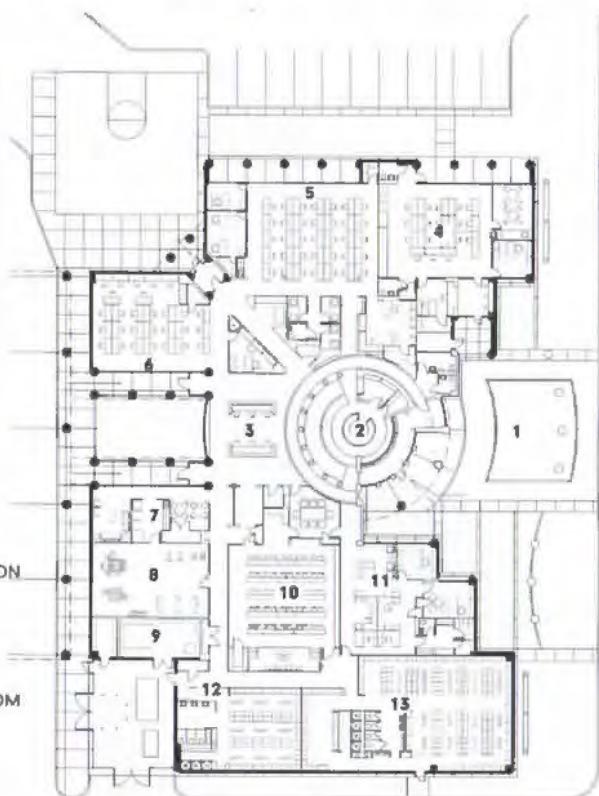
Facing page: Brinkley Sargent Architects of Dallas used brick, precast concrete, and glass for the public entry of the Southeast Dallas Police Facility.

Below: The entry lobby forms a hinge between the various departments housed in the building.



KEY TO PLAN

- 1 PUBLIC ENTRY
- 2 STATION OFFICER
- 3 REPORT WRITING
- 4 BUILDING INSPECTION
- 5 CRIMINAL INVESTIGATION DIVISION
- 6 PATROL
- 7 BREAK AREA
- 8 WORKOUT
- 9 MECHANICAL
- 10 BRIEFING
- 11 ADMINISTRATION
- 12 WOMEN'S LOCKER ROOM
- 13 MEN'S LOCKER ROOM





← Poll
→ Build
Inspe

Survey

HOK's DART Prototypes 60

URBAN TRANSIT The Dallas office of Hellmuth, Obata & Kasabaum has designed prototype stations for the first leg of DART's new rail line.

Turning a Corner 61

IN PROGRESS Phase one of the expansion of the Dallas Convention Center by JPJ Architects of Dallas is under way.

Reclaiming the Heights 62

NEIGHBORHOODS A Houston nonprofit group has devised an innovative urban strategy.

Persian Patterns 62

BOOKS Gerald Moorhead studies the sources behind Massoud Kheirabadi's new book on Iranian cities.

Aalto Masterpiece 63

BOOKS Gerald Moorhead reviews Donald Canty's book on a little-known Aalto library.

Pro on ConDoc 64

SMALL PRACTICE ISSUES Lawrence Cannolly describes his firm's use of the AIA's contract-document software.

Products and Information 65

Resources 66

Index to Advertisers 66

Marketplace 67

TA Index 68

HOK's DART Prototypes

URBAN TRANSIT Recent months have brought Dallas Area Rapid Transit (DART) waves of internal disruption, local political turmoil, and renewed threats to its operations and funding base, including the filing of bills by Dallas-area state legislators that would all but demolish the agency. But DART is pressing ahead with preparations for the first phase of its ambitious planned regional rail and bus system.

Work on the design standards for DART's 20-mile light-rail line has been completed by DART's Principal Section Design team; prime design consultant is Huitt-Zolars Engineers of Dallas. The Dallas office of Hellmuth, Obata & Kasabaum (HOK), as architectural design consultant for the team, has designed a prototype light-rail station for the DART line.

The design calls for each of the stations to be 300 feet long, to accommodate the three-car

three stations; one will be located at the Dallas Convention Center and one will be at Union Station, where the light-rail system will connect with the DART commuter-rail system and



model photographs by BlackmonWinters Photography



PROTOTYPICAL STATION STUDY

HOK has designed prototype stations for the first leg of DART's planned light-rail system. Above and below: A model shows the curved arched canopies spanning the tracks. Left: A rendering shows how the stations will fit in a near-town neighborhood.



trains that DART will run on the north-south light-rail starter line. Unlike light-rail stations in other cities, which are often little more than sidewalk shelters, the new DART prototypes will feature low-level platforms and arched canopies spanning the tracks from platform to platform. The design guidelines call for the canopies to be constructed of standing-seam metal, set in painted curved structural-steel trusses. The designers say that the open-air canopies, which will cover the boarding areas at each station, will create a sense of arrival and departure at the stations, as well as a sense of place within each station's neighborhood. According to HOK, DART will contract with other architects who will adapt the prototype design by varying colors and finishes according to criteria established for DART by HOK.

HOK is also providing the final design for

other rail lines. In addition, HOK is preparing site plans for all the station sites on the starter line and analyzing the development potential of the best locations. *Joel Warren Barna*



Dallas Convention Center

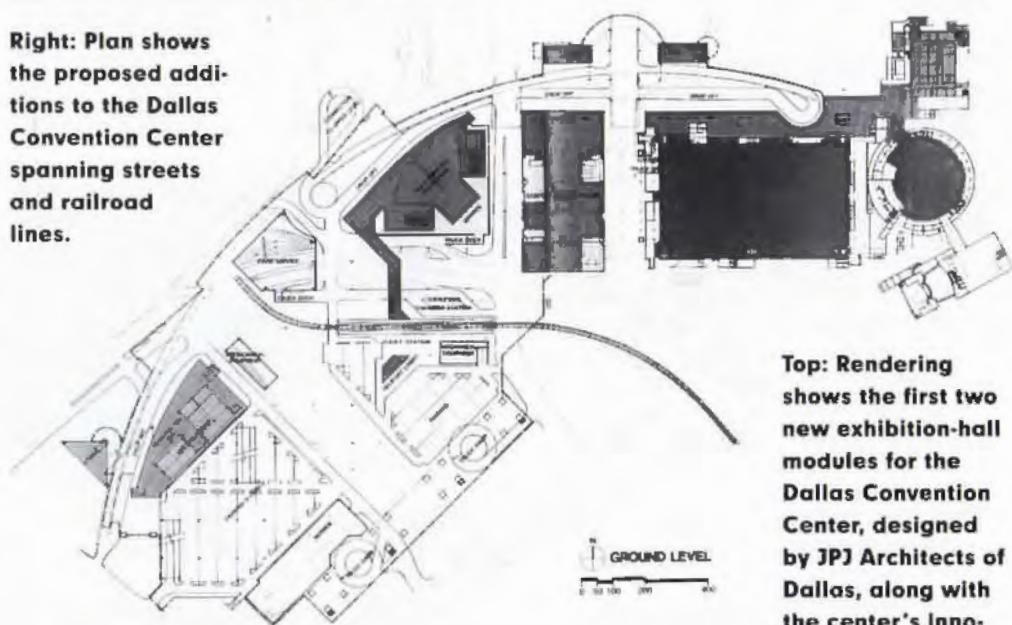
IN PROGRESS The design team for the new Dallas Convention Center includes JPJ Architects, Inc., of Dallas; Loschky Marquardt & Nesholm, of Seattle, Wash.; and John S. Chase Architects, Inc., of Houston.

The new complex, at completion, will total over 3 million square feet and include a new main ballroom, a multi-purpose auditorium, six new exhibition areas, a Dallas Area Rapid Transit (DART) light-rail station, and a vertiport.

The first phase of the convention center, designed by George Dahl, opened in 1957; it was greatly expanded in 1973 and 1984, in additions by Omniplan of Dallas. City of Dallas officials realized that, to compete for large national conventions, an expansion of the existing convention center would be necessary. This demand for more space precipitated the initiation of a Master Plan study. Completed in 1990, the study proposed increasing the convention center's exhibition space from 300,000 to 1 million square feet and to include expanded meeting rooms, ballrooms, public areas, transit connections, and support facilities.

The first phase of the project will include a portion of the vertiport facility, the planned DART light-rail station, and two new exhibition-hall areas. Each new exhibition area consists of a 100,000-square-foot rotated square; the rotation allows for later addition of four exhibition halls without disturbing the continuity

Right: Plan shows the proposed additions to the Dallas Convention Center spanning streets and railroad lines.



of the new design. Completion of this initial phase is due in December 1993.

The architects addressed the center's long-standing need for an east-west lobby connection by designing a new concourse that will run along the north side of the complex and, eventually, link the public spaces and functional areas from the existing lobby to the southwest end of the expansion.

When all phases of the expansion are complete, a total of 639,750 square feet of exhibit hall space, in six new modules, will be provided. Meeting spaces will be grouped around each module, allowing the exhibit halls to work independently of one another. All of the exhibition areas will also be combinable, creating a single million-square-foot space; up to 12 of the meeting rooms will also be joinable.

continued next page

Top: Rendering shows the first two new exhibition-hall modules for the Dallas Convention Center, designed by JPJ Architects of Dallas, along with the center's innovative vertiport facility; this phase is scheduled for completion in December 1993.

Left: After completion of the six-module expansion, the center will stretch over 10 city blocks.

Dallas Convention Center, continued from p. 61

Although the expanded convention center will be more than 10 city blocks in length, area traffic routes will remain the same. Arrival lobbies, the DART light-rail station, meeting rooms, parking and support areas will be situated at grade between the streets, the DART tracks, and other existing railroad lines. The exhibition halls will span the streets, leaving the traffic pattern undisturbed.

One especially interesting aspect of the new convention center is its emphasis on aircraft access to the center itself. The vertiport, which will accommodate both helicopters and tilt-rotor aircraft, is a major part of the plan. The vertiport area is to be located on an elevated platform above the truck docks on the south side of the building and will connect to the DART light-rail station; it will include space for aircraft rollways, parking and loading stalls, and service areas, along with public lobbies and concourses. This placement allows for direct aircraft access from the FAA-approved flight paths above the adjacent highways.

Separate segments of the building are designed to relate in massing and orientation to their immediate surroundings. For example, the new ballroom and the lobbies on the north side of the complex focus on Griffin Street as a visual link to downtown and will be integrated with park spaces planned for the future. Meeting rooms and lobbies on the northwest side relate to the Jefferson Street viaduct and the Reunion district, while the southwest end is made up of distinct forms that can be seen from various locations on the surrounding roadways. The public concourse will work to tie these segments into a cohesive whole. *Jobanna Rowe*

PROJECT Dallas Convention Center Expansion
CLIENT City of Dallas (Ramon F. Miguez, Director, Department of Public Works; Cliff Murphy, Project Manager, Facilities Planning and Construction; Jerry Barsbop, Director of Convention and Event Services, Department of Convention and Event Services; Danny Bruce, Director, Department of Aviation)
ARCHITECTS JPJ Architects, Inc., Dallas; Loschky Marquardt & Nesbholm, Seattle, Wash.; and John S. Chase Architects, Inc., Houston
CONTRACTOR Huber Hunt Nichols
CONSTRUCTION MANAGER Austin Commercial
CONSULTANTS Datum Engineering (structural); Blum Consulting Engineers and Campos Engineering (mechanical, electrical); Albert A. Half Associates (civil); SWA Group and Thompson Landscape Architects (urban design, landscape architecture); DeShazo, Starek & Tang (traffic/transportation); Pamela Hull Wilson Lighting Consultant (lighting)
RENDERS Erik van der Palen

Reclaiming the Heights

NEIGHBORHOODS In the pre-World War II residential areas of many Texas cities, the change from a pattern of owner-occupied homes to one of absentee landlords and rundown rental properties, then to crack houses and vacant lots, has seemed unstoppable. But in Houston's historic Heights area, activists including architect Kelly Thompson-Frater have created an innovative mechanism that they hope will help arrest destructive changes in their neighborhood's fabric.

Their creation is Redevelco, a corporation designed for reclaiming local properties. The organization buys houses and parcels of land one at a time from absentee owners and brings them up to marketable standards. The properties are then sold to new owners.

Our goal, says Kelly Thompson-Frater, is "to make the Heights a community that is physically safe for ourselves and financially safe for the sizeable investments we have in our homes and businesses."

According to Thompson-Frater, the major obstacle to maintaining the fabric of the



Redevelco's first project

Heights has been "slum lords"—absentee owners of dilapidated properties that "generate wonderful cash flow," while driving down the property values of the surrounding neighborhood. Because of the condition of such properties, she adds, they don't qualify for conventional financing; this has meant that they are typically sold, for cash, in what she calls a "slum-lord-to-slum-lord chain."

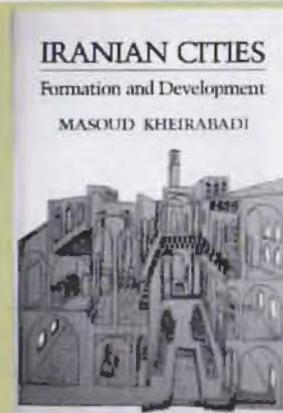
Other groups, including the Houston Heights Association (HHA), the Heights Chamber of Commerce, and the Houston Preservation Alliance, have worked hard to restore the area's historic character in the last decade. One group, Friends in Deed, was formed to investigate reconstituting deed restrictions (prohibiting absentee ownership or use for rental property, for example) that had

Persian Patterns

IRANIAN CITIES: FORMATION AND DEVELOPMENT
by Masoud Kheirabadi
University of Texas Press
(Austin, 1991)
196 pgs., 27 illus., \$27.50

BOOKS Masoud Kheirabadi has prepared a useful introduction to the study of traditional (pre-industrial, pre-World War II) Iranian cities. The full range of influences on the formation and development of the cities of the mountain regions and the central plateau are presented. Responses to the environment, trade routes and commerce, and the religious and social-political structures of Islam are discussed. The major premise of the book is that no one factor is dominant but that all are interwoven. The author rejects the accepted concept that these cities were composed according to an Islamic city model developed by an earlier generation of scholars; instead, Kheirabadi favors a more diversified, interdisciplinary approach, with religion forming only part of the picture.

The basic characteristics of Iranian cities include compact plans, uniform building



IRANIAN CITIES

Formation and Development

MASoud KHEIRABADI

heights, a hierarchy of street size and usage, courtyard housing types, and a pattern that combines interdependence and separation of public and private areas.

The book is, however, only an outline introducing the issues. Individual cities, their histories, and patterns and cycles of growth are not discussed. No time frames are given, so we do not learn when the cities were formed nor what the particular influences during different periods were. That detailed analysis is left to others.

The one factor that is neglected is the effect of extraterritorial influences. Since the history of the cities is not a part of this study, we do not know if ideas were drawn from other cultures. A look at the city plans presented by the author, and at the so-called Islamic city model, reveal the possibility of Roman influence: The essentially rectilinear city organization, ordered by major cross street that focus on the mosque, bazaar, and other public structures, appears to be a direct translation of the colonial Roman castrum, with its cardo and decumanus and its

lapsed on properties in the area, and to enforce the deed restrictions on the few properties to which they still applied. But, says Thompson-Frater, even these efforts were hampered by the area's many dilapidated properties, most of which had lapsed deed restrictions. Texas law permits deed restrictions for an area to be reestablished by a vote of 51 percent of the property owners; this was impossible because of the large number of absentee-owned properties.

The law provides that deed restrictions can be reinstated on a property when it is sold, however, and this led Redevco's organizers to develop their strategy of simply buying properties from slum lords. "We can fix up the buildings, and, just as important, reinstitute new deed restrictions," says Thompson-Frater.

Besides Kelly Thompson-Frater, the original shareholders in Redevco included her husband, financial planner Robert Frater; Patti and Richard Herdell; David Collins; Abel Joseph Dupuis, Jr., owner of the Yale Pharmacy, a Heights landmark, and Geneva Dupuis, treasurer of HHA; developer and HHA president

Bart Truxillo; investor Richard Markey and HHA officer Deborah Markey; Byron Pettit, chairman of Friends in Deeds; Nancy and Kenneth Williams; Carol Eckels Adams and Hill Adams; Tracy Englet and Kevin Englet; Nancy Nalence; and Kevin Willis.

Each of the shareholders (some of whom are couples rather than individuals) invested \$2,000 in the corporation and pledged guarantees for additional borrowed funds. The group then approached local lending institutions to discuss setting up financing for planned projects.

The group's first undertaking involved reworking two lots at the corner of 14th and Alston streets, with a two-story historic house that had been divided into apartments, along with a dilapidated four-plex and a garage. Redevco, with Tracy and Kevin Englet as project coordinators, negotiated a price and arranged financing, collateralized by the partners' seed money and guarantees, which was provided by Merchants Bank in the Heights.

After searching unsuccessfully for a buyer for the house on the site, they negotiated a deal

with a developer who was willing to buy the lots if the house were moved and the other buildings were demolished; he planned to build new houses compatible with others on the block. The outbuildings were torn down and the house was sold to new occupants, who moved it to their lot down the street. Deed restrictions will now protect the original lots from incompatible uses for 99 years. "We wanted to keep the house on the site, but this was the next best alternative. The new owners are restoring it. Several other renovation projects have now begun in the neighborhood," says Thompson-Frater.

Having succeeded with their first project (and having both raised capital and demonstrated their abilities to local lenders) the members of Redevco are planning to tackle something larger—"like an apartment complex," says Thompson-Frater. The group's continued success may constitute the most important missing piece to the puzzle of arresting neighborhood decay, providing a lesson for neighborhood activists throughout Texas. *JWB*

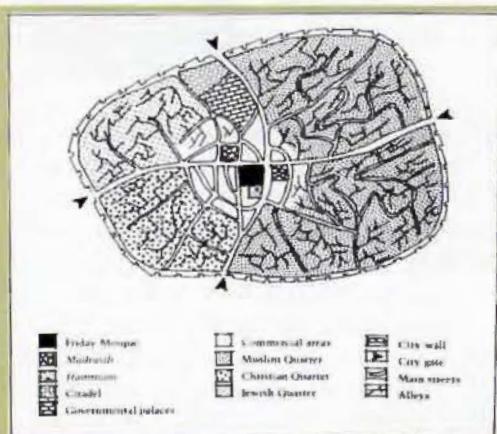


Illustration from IRANIAN CITIES

forum, baths, and temples. The hierarchy of street use from public to private is common to both city types. Most areas of Islamic expansion around the Mediterranean had also been Roman colonial lands, so the possibility of this influence on Persia cannot be ignored.

Kheirabadi provides a useful glossary of terms in Farsi and an extensive bibliography of works on the Iranian and Islamic city. Although brief, this book is an interesting introduction to material that is not often studied, and calls attention to issues that could profitably be considered in city planning. *Gerald Moorhead*

Waves and Light

LASTING AALTO MASTERWORK:

THE LIBRARY AT MOUNT ANGEL ABBEY

by Donald Canty

**Mount Angel Abbey, Order of St.
Benedict, (Mount Angel, Ore., 1992)
47 pgs., 37 illus., \$19.95 paperback**

BOOKS Little has been published about Alvar Aalto's second work in the United States, the library at Mount Angel Abbey, built in 1970 in Mount Angel, Ore. Author Donald Canty, former editor of *Architecture* magazine, fills the gap with this small, handsome book, which is amply illustrated with plans and both period and new photographs.

The Mount Angel library shows similarities in plan and massing to Aalto's earlier designs for libraries in Otaniemi, Seinajoki, and Rovaniemi. In each of these schemes, the idiosyncratic Aalto fan shape (or wave shape—*Aalto* means wave in Finnish), springs from a rectilinear background block. In all of these libraries, the fans contain radiating stacks and the central "hinges" are formed by the control desk and a "book pit" of sunken reading terraces.

But a larger issue unites all Aalto's libraries,



Lasting Aalto Masterwork

including those that have plan forms other than the block-fan grouping. This is the handling of natural light. Aalto recognized that a library is a place not only for storing books but for reading as well, and he knew that comfortable lighting was essential. In his libraries, deep conical skylights bring diffused light into the central space, and clerestories reflect light off curved ceilings into the stacks and reading areas.

Despite the strong family resemblance it bears to its predecessors, the Mount Angel library is special. All of Aalto's other libraries are built on flat ground, so their internal level changes, especially their sunken reading areas, are modest. The Mount Angel site, however, is on the crest of a ridge where Aalto could use the slope for a much more dramatic cascade of concentric terraces projecting out into the fan. Emphasized by the curving clerestory overhead, the combined upward and downward vistas expand the contained space.

With its description of the project's history, Canty's little volume would be a good addition to any Aaltophile's library. *Gerald Moorhead*

Prize-winning Houston architect *Gerald Moorhead, FAIA*, is a TA contributing editor.

Pro On ConDoc

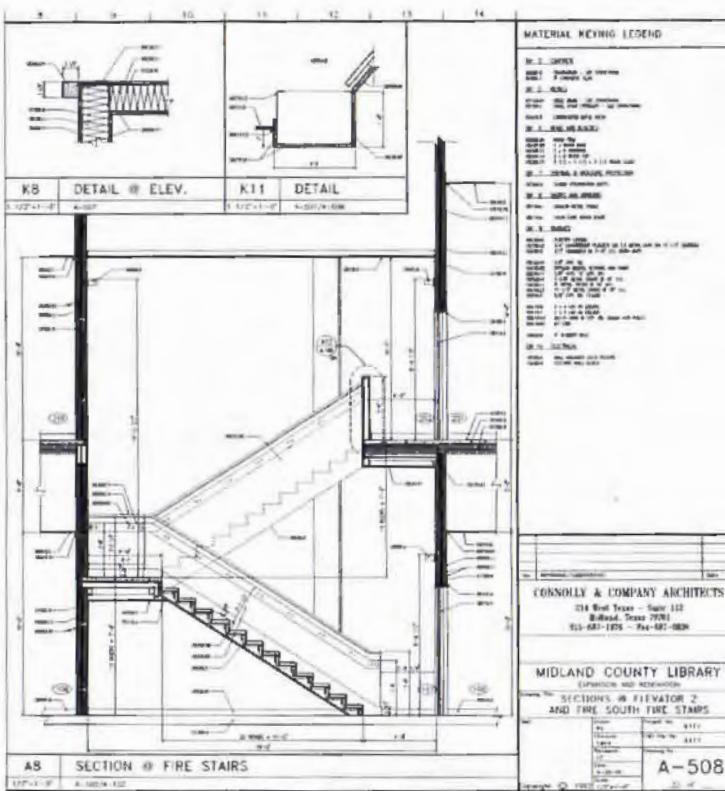
AFTER FIRST READING ABOUT CONDOC in 1985 in the AIA's now-defunct magazine *Architectural Technology*, and being besieged for several years afterwards with pamphlets advertising instructional seminars, our office finally decided to learn about this "new system for formatting and integrating construction documents." We began by attending the AIA's Professional Development Workshop on ConDoc at the 1990 national convention.

ConDoc so impressed us at the workshop that we purchased the corresponding software. Once it was installed, we elected to try the system on a commercial project that was ahead of schedule (This decision was made following the software user's axiom: Never try to use new software during a tough production schedule.)

During this initial production process, I showed the ConDoc'd drawings to local construction firm estimators for a gauge of their receptiveness to this new and unfamiliar system. Every one of them seemed unfazed by the new system, but didn't really see, at that time, how it might help them do their job better.

For us, the effect was immediately appreciable. Prior to the advent of ConDoc, our office had long grappled with the arbitrary organization of working-drawing notes. In the constant effort to improve construction documents, our noting formats had evolved over the years. Initially, we noted working drawings individually, then adopted keynoting. In keynoting, instead of rewriting a note, a number is referenced on the sidebar. The use of hand-lettered keynotes was later improved on by the easier-to-read typed sticky-back keynotes. However, we abandoned that particular hybrid of manual drafting/mechanical printing when we began using CADD. Nevertheless, the problem of how to effectively organize the keynotes on our drawings still remained until we discovered ConDoc.

ConDoc organizes keynotes according to CSI's 16-division format. The beauty of the ConDoc system is that each note has one and only one number for each item identified. For example, "09650.B—4-inch rubber base" would retain that keynote number throughout the project's documents.



In addition to this familiar organization in the keynoting system, ConDoc also formats drawings so that information can be readily found by following prescribed sheet-and-coordinate notations. For the first time with construction documents, the complementary nature of drawings and specifications has a corresponding number connection so that notations for the graphic and the written information are effectively integrated.

This is where one of the great benefits of ConDoc has become clear to us and the contractors we work with. Before, keynotes could arbitrarily identify both material and assembly; with ConDoc, the numbered keynote identifies the material only, and the assembly process is described only in the specifications. General contractors have told us that, with ConDoc documents, their superintendents, project managers, estimators, and subcontractors are forced to follow specifications more carefully.

In our office, abiding by ConDoc provides an invaluable check system for producing coherent construction documents. The master keynote list at the beginning of the drawings can be used for an item-by-item review of the specifications. This allows the checker to make sure that every keynote is addressed in the specifications. This additional check, although

Detail from a construction document produced with ConDoc software

time consuming, is far preferable to discovering an error or omission after the contract has been signed, which could potentially result in a difficult-to-explain change order.

Initially, we used ConDoc exclusively for commercial work, but we have gradually incorporated it into the drawings for all building types, including residential remodeling and addition projects. When introducing our firm

to potential clients, we use ConDoc as a marketing device, although this has produced mixed results—even experienced clients can't fully appreciate the benefits of the system.

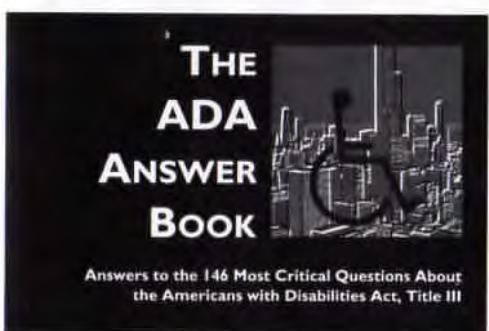
After using ConDoc for three years, I have found it to be beneficial for all involved. The owner benefits because the improved quality of the bidding documents can mean lower bids. The contractor can more clearly define the scope of work during bidding and avoid costly surprises. The architect saves time entering information and gains productivity in producing a contract with a much clearer set of construction documents. Since there is so much information that architects have to communicate, tools that help organize and integrate construction documents are essential. It appears that ConDoc will become an industry standard for organizing drawings, much as CSI's 16-division format became standard for specifications back in the 1960s, enabling all in the construction industry to communicate with each other more effectively.

Lawrence H. Connolly

Lawrence Connolly is principal of Connolly & Company Architects of Midland.

For information on ConDoc, call the AIA Professional Systems Division at 800/424-5080 x 75476

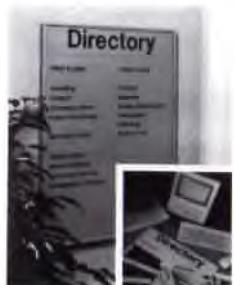
PRODUCTS AND INFORMATION



THE ADA ANSWER BOOK

Answers to the 146 Most Critical Questions About the Americans with Disabilities Act, Title III

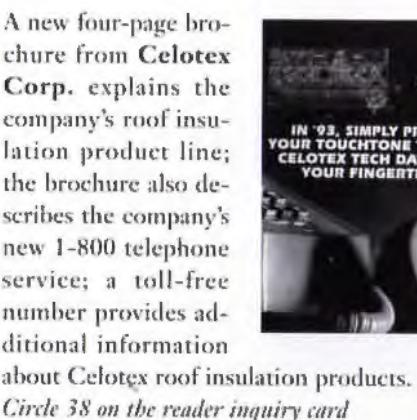
The Building Owners and Managers Association (BOMA) International has published an interpretation of the Americans with Disabilities Act (ADA), Title III. The ADA Answer Book answers 146 questions about the ADA. *Circle 56 on the reader inquiry card*



Kroy's new Contemporary Directory can be lettered and updated easily, efficiently, and cost-effectively with any one of Kroy's in-house updating systems. The directory is wall-mounted in a tarnish-resistant frame and carriers of extruded, powder-coated aluminum.

Circle 151 on the reader inquiry card

The CadPLUS AE Design System prepares architectural and engineering construction documents and 3D presentation models. The system also tracks assets, provides space-utilization calculations, and issues schedules and reports. CadPLUS runs transparently on AutoCAD Releases 11 and 12 and AutoCAD for Windows. *Circle 152 on the reader inquiry card*



A new four-page brochure from Celotex Corp. explains the company's roof insulation product line; the brochure also describes the company's new 1-800 telephone service; a toll-free number provides additional information about Celotex roof insulation products. *Circle 38 on the reader inquiry card*

Glen-Gery Brick has introduced a detectable warning surface paver developed in accordance with provisions of the Americans with Disabilities Act (ADA). The specially textured paver helps make the presence and location of areas such as crosswalks, curb cuts, ramps, and entrances easier to detect.

Circle 153 on the reader inquiry card

Azrock has introduced 13 new colors inspired by the natural world in its Custom Cortina line of vinyl composition tiles. Custom Cortina has mottled patterning distributed through the thickness of each tile. It is suitable for high-traffic commercial, institutional, industrial, and residential areas. *Circle 154 on the reader inquiry card*



Zap Industries, Inc., has introduced a new collection of contemporary furniture, including this bookcase, designed by Marc Ewing. Each piece is crafted of hardwood using book-matched veneers. All are offered in a variety of analine-dyed colors from neutrals to brights. *Circle 155 on the reader inquiry card*



The new faux-wood finishes in Westinghouse Micarta's laminate collection are recommended for cabinetry, furniture, tabletops and counters, walls, and doors. The new finishes include mahogany, rosewood, cherry, walnut, teak, and oak. *Circle 156 on the reader inquiry card*

Saving Energy and the Environment



Magna-Frame™ series casement and awning windows from ALCOA VINYL WINDOWS offer energy efficiency, easy maintenance, good looks, and easy on-site installation. *CIRCLE 157 ON THE READER INQUIRY CARD*

A new line of low-voltage landscape lights from INTERMATIC feature the energy efficiency of halogen bulbs plus a variety of contemporary styles. Available in angle, bollard, pyramid, and tier styles, the fixtures are constructed of heavy-duty cast aluminum.

CIRCLE 158 ON THE READER INQUIRY CARD



The Storm Water Control System from PATTERSON ENVIRONMENTAL offers an economical method for disposing of over 95 percent of storm water runoff for less than a penny per gallon.

CIRCLE 159 ON THE READER INQUIRY CARD



A new lever-actuated, slow-closing faucet from CHICAGO FAUCETS provides adherence to the latest Americans with Disabilities Act (ADA) accessibility standards and conserves water.

CIRCLE 160 ON THE READER INQUIRY CARD

Prairie Buffalograss and 609 Buffalo-grass from the TURF FARMS OF CREN-SHAW & DOGUET thrive with minimal irrigation and are resistant to disease and temperature extremes. Both are low-growing without seed heads, a feature that minimizes or eliminates the need to mow.

CIRCLE 161 ON THE READER INQUIRY CARD

Resources: Manufacturers and Suppliers

Texas State Capitol Extension, pp. 42-45

Architectural woodwork: Robert Shaw; Ornamental metal: Berger Iron; Terrazzo: American Marble; National Marble; Paint: Pratt & Lambert; Glued wall fabric: Knoll International; Door frames: Eggers Industries; Doors: Algoa Hardwoods; The Mainman Co.; Waterproofing: American Colloid; American Hydratec; Kitchen equipment: Custom Kitchen Equipment Co.; Columns: Casting Design, Inc.; Granite: Cold Spring Granite Corp.; Texas Granite; Insulation: Dow Styrofoam; USG; Irrigation System: Toro Co.; Concrete framework: Economy Forms Co.; Skylights: Bristolite; Plaster: USG; Gold Bond; Graphics: Roland Edwards Sign Co.; Windows: Arrow Glass; Sealants: Temco Sealants; Hardware: Hager, Schlage; Ceilings: Armstrong; Drywall: Merek Brothers Systems

Federal Reserve Bank, pp. 46-49

(The Federal Reserve Bank of Dallas does not endorse any of the companies or products listed here) Concrete pavers: Pavestone; Limestone interior stonework: Bybee; Limestone: Harding & Cugswell; Limestone/precast panels, architectural precast: Arkansas Precast; Expansion joint covers: Metalines, Millwork and casework: Whitson Industries; Architectural woodwork: Interior Woodwork Corp./Knoll Group; Waterproofing: Carlisle Syntec Systems; Roofing and pavers: Firestone Building Products; Hollow metal doors and frames: Door Pro Systems; Office front frames: Fenestra; Wood doors: Weyerhaeuser and Dallas Door and Supply; Security frames and glazing: Chicago Bulletproof; Hardware: Schlage; Skylight and entry storefront: Super Sky Products; Reflective glass: Viracon; Aluminum extrusions: Tredegar Aluminum; Vestibule and connector panels: Baker Metal Products; Aluminum panels: Alucobond Technologies; Acoustical grid: National Rolling Mills, Inc.; Acoustical tile: Armstrong World Industries; Drywall reveals: Gordon, Inc.; Ceramic tile: Dal Tile; Quarry tile: American Olean; Poured rustic terrazzo: American Terrazzo; Carpet tile: Lee's Carpet Mills; Custom broadloom carpet: Atlas Mills; Access flooring: GHP, Inc.; Toilet partitions: Global; Toilet accessories: Bradley; Louvers: Waleo; Operable walls: Hufcor; Window-washing equipment: Highrise Systems; Dock equipment: Kelly/Miner and Associates; Kitchen equipment: Pronto; Shooting-range equipment: Caswell; Cash destructor: Sinclair; Systems furniture: The Knoll Group; Window treatment: Levelor; Security system: Software House; Vault doors: Mosler; Elevator cabs: Tyler Elevator Products; Material handling system: Eaton Kenway Corporation; Plumbing fixtures: American Standard; Fire protection sprinkler heads: Reliable Sprinkler Company; Indirect lighting: Peerless Lighting; Building control system: Johnson Controls

Irving Criminal Justice Center, pp. 50-52

Brick: Elgin-Butler; Exterior glazing: Guardian; Glass block: Pittsburgh-Corning; Roofing: Firestone Rubber Products; Security system: Cesco/Normet; Security glazing: Viracon; Builder's hardware: Sargeant; Elevators: Schindler; Acoustical ceiling tile: Armstrong; Terrazzo: American Terrazzo

Alamodome, pp. 54-55

Concrete: Schoenfeld; Reinforcing steel: SMI; Steel forms: EFCO; CECO; Structural steel: Crown Steel; Steel joists: Vulcraft; Precast concrete: Manco; Joint sealant: Sonneborn (Chem Rex); Paint for steel: Benjamin Moore; Sherwin Williams; Miscellaneous steel: Beck Steel; Precast masonry: Barrett; Wall insulation: Dow Styrofoam; Standing-seam metal roof: Steelite; Metal wall panels: Steelite; Single-ply roofing: J.P. Stevens (Hypalon); Glass: Tempglass; Curtainwall panel system: Alucobond; Overhead doors: Overhead Door Corp. of San Antonio; Metal drywall studs: Dietrich Industries; Gypsum wall board: USG; Interior paint: Sherwin Williams; Interior wall covering: Koroseal; B.F. Goodrich; Dock leveler: Rite Hite; Carpet: Prince St. Technologies; Patercraft; Wood doors: Fenestra; Toilet accessories: Bobrick; Folding partitions/operable walls: Advanced Equipment; Lockers: List Industries; Millwork: Koehler Co.; Hollow metal doors and frames: Tex-Steel; Hardware: Sargeant; Soss; Stanley; Trimec; Rixson-Fivemark; Remko; National Guard Products; H.B. Ives; Elevators and escalators: Montgomery; Plumbing fixtures: Crane (Noland Distributors); Drinking fountains: Elkay; Fire sprinkler system: Grinnell; Ice rink system: Rothmar; Air-handling units: Trane; Switchgear: Westinghouse; HVAC and lighting-control system: Johnson Controls; Light fixtures: Redwine Krueger; Structural frame: precast concrete; field level slab; masonry; hollow-metal doors, frames, hardware; Cherry Street improvements: Lyda, Inc.; Aluminum glazing

systems: Arrow Glass Company, Inc.; Graphics (signage): ANDCO Industries Corp.; Conveying systems, escalators, and elevators: Montgomery Elevator Company; Sound systems: Proshow; Upper deck seating: Interkal, Inc.; John E. Clark Co.

Western Currency Facility, pp. 56-57

Steel joists: Vulcraft; Skylight: Waseco; Roofing: A/R Contractors; Architectural precast concrete: Western America; Steel: Continental; Access flooring: Hudson Building Systems; Ceramic and quarry tile: AG Keen; Dumbwaiters and elevators: ESCO Elevators; Fireproofing: Commercial Spray Systems; Building specialties: S.P. Gilbert; Overhead doors: Overhead Door Co. of Fort Worth; Laboratory Fume Hoods: Keweenaw Scientific Corp.; Testing lab service: A.T. Laboratories; Fencing, gates: USX, Cyclone Fence; Accordion folding partitions: Cowser Associates; Specialty doors, curtains, dock equipment: Johnson Equipment Co.; Metal lockers: Rocky Durson and Associates; Wire mesh partitions: Acorn Wire and Iron Works; Louver blinds, drapery tracks: First Drapes; Scales: The Aldinger Co.; Electrical: Humphrey & Associates; Site utilities, louvers, plumbing, HVAC, process mechanical: Natkin and Company; Drilled piers: Contractors Foundation Drilling Co.; Masonry: Fenimore-Blythe; Painting, wall covering, sandblasting, and tape, bed and float: J.L. Manta; Fire protection: Grinnell Fire Protection Systems; Shredding, trim waste collection system: Air Systems Engineering; Drywall, insulation, acoustical, lath and plaster, metal ceilings, glass fiber reinforced concrete: Integrated Interiors; Controls, fire alarm: Johnson Controls; Steel, precast erection: Transfield Corp.; Attack resistant package: Norshield Security Systems; Carpet, resilient flooring: Superior Carpet Corp.; Waterproofing, sealants: Frontier Waterproofing; Glass, glazing: Riverside Glass and Mirror, Layne Glass Co.; Earthwork: Huggins Construction; Vault, bank casework: LeFebure; Concrete paving: L.L. Bertram Construction and Engineering; Granite: Cold Spring Granite Co.; Granite installation: Fitzgerald Tile Corp.; Granite floor emblem installation: J. Rios, Inc.; Architectural precast concrete materials: Meridian International; Structural fiberglass members, grating, anchoring: International Grating; Metal roofing, siding: Metal Systems; Acid brick: Industrial Flooring; Wood doors: Weyerhaeuser and Dallas Door and Supply Co.; Hollow metal doors, frames: Door-Pro Systems; Prefinished panels: Newcourt, CKA Enterprises; Benches: Kroin, Inc.; Tree grates: Urban Accessories; Expansion joint assemblies: Balco Co., R.J. Dewees & Son; Fountain equipment: Kim Lighting, Hossley Hollingsworth Lighting; Cast-in-place concrete: Pioneer Concrete of Texas

Southeast Dallas Police Station, pp. 58-59

Concrete pavers: Pavex (Quadro); Precast concrete: Southwest Prestressed; Brick: Boral Brick; Structural joists: Vulcraft; Millwork: Topay; Exterior finish system: STO; Roofing: Firestone; Aluminum doors, frames: Division 8; Hardware: Yale; Ceiling tile: Armstrong; Chicago Metallic Grid; Resilient flooring: Armstrong; Carpeting: Mohawk; Stratton; Lockers: List Industries; HVAC: Trane; Barber Coleman Controls

Dallas Convention Center Expansion, pp. 61-62

Coatings and caulking: Aberdeen Industries, Inc.; Operable partition: Advanced Equipment Corporation; Miscellaneous metals: American Steel and Aluminum, Inc.; Terrazzo: American Terrazzo Co.; Louvers: Architectural Specialties; Drywall and ceilings: CMI/CTI Joint Venture, Dallas; Chain link fences and gates: Cyclone Fence; Masonry: Dell Masonry; Reinforcing steel: Desert Steel/J.D., A Joint Venture Partnership; Roofing: Max Eubank Roofing Company, Inc.; Millwork: Facility Construction Services, Inc.; Structural steel: Hirschfield Steel Company, Inc.; Overhead doors: Johnson Equipment Company; Preformed metal panels: Metal Systems, Inc.; Ceramic tile: Modern Tile Company; Elevators and Escalators: Montgomery Elevator Company; Concrete fill: G.L. Nettles; Color imprinted concrete: North Texas Bomanite, Inc.; Fire protection: Northstar Fire Protection of Texas, Inc.; Resilient tile and carpet: Reiser Associates, Inc.; Identifying devices: Roland Edwards Sign Co.; Pavement markings: Stripe-A-Zone; Architectural precast panels: Structural of Texas, Inc.; Painting: Mike Trice Painting, Inc., Inc.; Sprayed fireproofing: True Fireproofing Company, Dallas; Sound and security systems: Unitech Technology Construction Inc.; Glass and glazing: Verto, Inc.; Glass handrail: W & W Sales, Limited, Spring Valley; Metal toilet compartments and accessories: Charles E. Williams Company, Inc.

Index to Advertisers

| Pg. Advertiser | Circle No. |
|--|------------|
| 40 AIA Master Systems | 108 |
| 4 AIA Trust | 14 |
| 39 Allied Marketing | 112 |
| 14 American Standard | 8 |
| 36 American Limestone | 9 |
| 39 American Marble Mosaic | 137 |
| 67 APPCO Products, Inc. | 141 |
| 21 Balf/Best-Rite Manufacturing | 66 |
| 14 Bellaire Plumbing Supply | 8 |
| 67 Benjamin Moore | 59 |
| 67 Capitol Rubber Stamp | |
| 30 Cold Spring Granite | 26 |
| 69 Concreation | 41 |
| 67 Crawford Friend Consultants | 96 |
| 18 Dallas Door and Supply Co. | 147 |
| 31 Elgin-Butler Brick Co. | 18 |
| 29 Featherlite Building Products | 6 |
| 6 Fisher Home Design Center | 4 |
| 36 The Glass Block Shop | 104 |
| 67 Industrial Roofing & Insulation | |
| 24 J.P. Stevens Roofing System | 58 |
| 23 James Hardie Building Products | 47 |
| 2 Jewell Concrete Products | 7 |
| 67 Koroseal Wallcoverings | 150 |
| 70 Kroin, Inc. | 100 |
| 6 Lone Star Plywood & Door Corp. | 4 |
| 67 Manca | 146 |
| 6 Marvin Windows | 4 |
| 6 Marvin Windows Planning Center | 4 |
| 28 Masonry & Glass Systems, Inc. | 10 |
| 37 Masonry Institute | 3 |
| 4 McCoy, Inc. | 51 |
| 13 Miller Blueprint | 13 |
| 6 OMC Industries | 22 |
| 35 Pavestone Company | 17 |
| 32 Pavex, Inc. | 28 |
| 13 Professional Lines Underwriting Specialists | 12 |
| 14 San Antonio Plumbing Distributors | 8 |
| 32 Secure, Inc. | 34 |
| 12 T.G.M. Associates | 42 |
| 12 Texas Hospital Association | |
| 21 Texas Kiln Products | 106 |
| 18 Thorntree Slate & Marble | 44 |
| 40 United Glazed Products | 81 |
| 38 Valley Builders Supply Block & Brick | 23 |
| 14 Vulcraft | 80 |
| 18 Weyerhaeuser Architectural Doors | 147 |
| 67 What Its Worth | 54 |

MARKETPLACE



Crawford & Friend
3003 Bledsoe Street
Fort Worth, Texas
76107 • 2905
817 • 336 • 8886

Arenas
Churches
Auditoriums
Commercial
Residential

Non-proprietary consultation, design, and specifications for
Lighting • Dimming • Sound • Acoustics • Rigging • Draperies
Sightline Studies • Audio/Visual • Theatre Safety Assessments
Theatre Planning • Projection Systems • Feasibility Studies

Consultants Specializing In Performing Arts Technology And Planning

Circle 96 on the reader inquiry card



Importers of:
• MARBLE
• GRANITE
• TILE
• SLATE
• GLASS MOSAICS

6314 St. Augustine, Suite B (Zip 77021-2615)
P.O. Box 14493 (Zip 77221-4493) (713) 747-7645
Houston, Texas FAX (713) 747-2526

Circle 141 on the reader inquiry card



1300 NATIONAL STREET
HOUSTON, TX 77007

Benjamin Moore & Co.

(713) 869-5081
FAX-(713) 869-6226

RAYMOND GROSS
ARCHITECTURAL SERVICE REPRESENTATIVE

Established 1883

Circle 59 on the reader inquiry card

Koroseal® Wallcoverings

10020 Bridgegate Circle
Dallas, TX 75243
(214) 238-5611
FAX (214) 238-8828

Robert R. Elwell
Regional
Sales Manager

A Division of RB International Corporation

Circle 150 on the reader inquiry card

WHAT IT'S WORTH
P.O. BOX 162135 • AUSTIN, TX 78716
512-328-8837

Longleaf Heart Pine Flooring, Milled
from Antique Texas Southern Yellow Pine
Also Louisiana Virgin Sinker Cypress

TEXAS HEART PINE FLOORING

Circle 54 on the reader inquiry card

Free Roofing Update on Video

Let IRI take you on a video tour of the world's largest polyurethane foam roofing projects. Architects and industry experts demonstrate spray foam applications across the country. See how foam technology can enhance your next project.

Call toll-free 1-800-ROOF-TEC (1-800-766-3832)

IRI Industrial Roofing & Insulation Inc.
8980 Scranton, Houston, TX 77075-1088

Manco Prestress Company

MANUFACTURED CONCRETE PRODUCTS



Eddie Botello
Vice President
Sales/Estimating

ROUTE 2, BOX 223
SAN ANTONIO, TEXAS 78249

OFFICE (512) 690-1705
FAX (512) 690-1755

Circle 146 on the reader inquiry card

MARKETPLACE

Advertising in Texas Architect's Marketplace is available for \$80 per column inch (2-1/2" wide), one-inch minimum; business cards are \$240 (2" x 3-1/2"). Ads may be line or display. Design and typesetting available at \$10 per column inch for each service. Rates net, not commissionable. Closing date is the 13th of the second month preceding publication date (for example, March 13 for the May/June issue).

Sharon Ruth Pike,
Owner
Capitol Rubber Stamp
1912 S. Congress Ave.
Austin, Texas 78704
Fax (512) 447-6918
Tel (512) 447-0335
SEALS \$21.00
STAMPS \$15.00
STAMP PADS \$ 3.00
Prompt 2 Day Turn-Around
Call, Mail or Fax Your Order
(Includes Tax & Shipping)
M/C & VISA Accepted



Texas Index March / April 1993

LEADING INDICATORS:

October and November, 1992

| | Latest Month | Previous Month | Change % |
|---|--------------|----------------|----------|
| Texas Leading Indicator Index (Jan. 1981 = 100) † | 120.0 | 119.3 | .1 |
| Initial Claims for Unemployment Compensation | 68,046.0 | 70,807.0 | -3.9 |
| Average Manufacturing Hours/Week | 43.1 | 43.1 | - |
| Help Wanted Index (1979=100) | 120.0 | 119.8 | .1 |
| Retail Sales (Million \$) | 11,374.0 | 11,660.0 | -2.5 |
| Oil Price (\$/Barrel) | 18.3 | 19.7 | -7.0 |
| Stock Index (1980=100) | 202.0 | 190.0 | 6.3 |
| Housing Permits (3-month moving avg.) | 5,210.0 | 5,262.0 | -.9 |
| New Business Incorporations (3-month moving avg.) | 2,961.0 | 2,833.0 | 4.5 |
| Consumer Confidence Index (1985=100) | 68.9 | 55.4 | 24.0 |
| U. S. Leading Economic Indicator Index † | 150.3 | 149.1 | .8 |

† Texas and U.S. leading indicators based on figures for industrial output, sales, employment, prices, interest rates and other factors.

TOTAL NONAGRICULTURAL JOB GROWTH: Oct. 1992

FOR TEXAS AND BORDER STATES

| State | Job Growth* | Percent Change | Rank |
|------------------|-------------|----------------|------|
| Texas | 84.6 | 1.2 | 15 |
| Louisiana | -6.0 | -0.4 | 35 |
| Arkansas | 29.9 | 3.1 | 1 |
| Oklahoma | -10.6 | -0.9 | 38 |
| New Mexico | 6.4 | 1.0 | 17 |
| National Average | 269.0 | .3 | - |

*In thousands

TEXAS POPULATION CHANGE

| Year | Population | Annual Change | |
|-------|------------|---------------|-----|
| | | Amt. | % |
| 1991 | 17,349,000 | 290,600 | 1.7 |
| 1992 | 17,669,960 | 320,960 | 1.9 |
| 1993* | 17,951,490 | 281,530 | 1.6 |
| 1994* | 18,193,380 | 241,890 | 1.3 |

*Projected

TEXAS NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT

| | Nov. '92 | Oct. '92 | Change |
|-------------------------------------|-----------|-----------|--------|
| Total Nonagricultural Employment | 7,342,500 | 7,315,400 | 27,100 |
| Manufacturing | 992,800 | 992,000 | 800 |
| Durable Goods | 552,500 | 552,400 | 100 |
| Nondurable Goods | 440,300 | 439,600 | 700 |
| Nonmanufacturing | 6,349,700 | 6,323,400 | 26,300 |
| Mining | 173,500 | 173,400 | 100 |
| Construction | 355,200 | 355,900 | -700 |
| Transportation and Public Utilities | 437,600 | 436,800 | 800 |
| Wholesale and Retail Trade | 1,770,700 | 1,755,100 | 15,600 |
| Finance, Insurance, and Real Estate | 430,400 | 430,300 | 100 |
| Services | 1,856,800 | 1,842,700 | 4,100 |
| Total Government | | | |
| State & Federal | 1,325,500 | 1,319,200 | 6,300 |

ECONOMIC FORECASTS FOR 1993

| Texas Forecasts | 1992* | 1993** |
|--|----------|----------|
| Gross State Product (in billions of 1987\$) | 338.9 | 349.3 |
| Annual % Change | 2.6 | 3.1 |
| Personal Income (in billions) | 318.5 | 339.5 |
| Annual % Change | 6.0 | 6.6 |
| Nonfarm Employment (in thousands) | 7,262.7 | 7,417.3 |
| Annual % Change | 1.3 | 2.1 |
| Resident Population (in thousands) | 17,705.4 | 17,982.3 |
| Annual % Change | 1.8 | 1.6 |
| Unemployment Rate (%) | 7.4 | 6.5 |
| Oil Price (\$ per Barrel) | 18.8 | 19.6 |
| Natural Gas Price 1.64 (in \$ per thousand cubic feet) | 1.6 | 1.6 |
| Oil/Gas Drilling Rig Count | 242.0 | 224.0 |

U. S. Forecasts

| | | |
|--|---------|---------|
| Gross Domestic Product (in billions of 1987\$) | 4,908.7 | 5,052.0 |
| Annual % Change | 1.8 | 2.9 |
| Construction Price Index (1982-84=100) | 140.4 | 145.1 |
| Annual % Change | 3.0 | 3.4 |
| Prime Interest Rate | 6.3 | 6.5 |

*1992 figures actual; **1993 figures projected

Compiled by Johanna Rowe

from TEXAS ECONOMIC OUTLOOK, January 11, 1993

published by John Sharp, Comptroller of Public Accounts

Architectural concrete paving.

Reconstructed Stone is a blend of fresh portland cement, fade resistant pigments and typically granite or marble sands although we can utilize any sands you wish. It is packaged 60 lbs. per 5 gal. bucket and its application rate is 150 lbs. per 100 square feet. It is applied by the dry-shake method to the surface of fresh concrete and given a hard steel trowel finish. After adequate curing you then sandblast or acid etch the surface to depress the matrix and reveal the aggregates. If you have paid any attention to the surface of concrete flatwork you will have noticed that over time the surface has worn down to reveal the sand fines in the concrete. So instead of settling with a gray matrix and normal concrete sands you can have any color matrix and any single or combination of aggregates you wish. Send us other material such as brick or stone being used and Concreation will make your custom samples of Reconstructed Stone.

concreation

955 Kennedy Lane
Saginaw, Texas 76179
1-800-292-2012



Kroin

Kroin Incorporated
Kroin Commercial Products Division
180 Fawcett Street
Cambridge, Massachusetts 02138

Telephone 617 492-4000
Telefax 617 492-4001

Kroin Sanitary Fittings
Commercial Lavatory Faucets
Designed by Prof. Arne Jacobsen, MAA
Selected for the Design Collection, MoMA

For information circle 100.

Commercial Interruption

Tune into the Kroin Commercial Products Division for a program of competitively priced Lavatory Faucets that provide years of continuous service.

These faucets incorporate varying functions within the classic Kroin design with models featuring volume and/or temperature control, time release mechanisms and pre-set GPM for energy conservation. All are approved by ANSI

(American National Standards Institute) and select faucets are available with long lever handles for the physically challenged.

So whether your next project is a health club, hotel or corporate headquarters, choose Kroin: the faucet program that performs without interruption.

